

01/23/13

OVERVIEW:

DEPARTMENT OF
ENVIRONMENTAL
CONSERVATION

<TARGET><BILL></BILL><SUBJECT>01-23-13 OVERVIEW
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION</SUBJECT><COMM>HRES28</COMM></TARGET>

Linda Hay

From: Trevor Fulton
Sent: Tuesday, January 22, 2013 3:41 PM
To: Anna Latham; Cecile Elliott; Chere Klein; Erin Shine; George Ascott; Joseph Caissie; Linda Hay; Louie Flora; Rep. Chris Tuck; Rep. Craig Johnson; Rep. Dan Saddler; Rep. Eric Feige; Rep. Geran Tarr; Rep. Kurt Olson; Rep. Mike Hawker; Rep. Paul Seaton; Rep. Peggy Wilson
Cc: Crystalline Jones; Julie Koehler; Ken Erickson; LIO Juneau
Subject: RE: HRES Committe Documents for 1/23/2013, part 2 of 2
Attachments: SPAR Division Overview FINAL.PDF; Water Overview (H) RES FINAL.PDF

House Resources Committee members and staff,

Attached are the presentation materials for tomorrow's HRES overview of the Department of Environmental Conservation. Following a brief introduction by Commissioner Hartig, the division overviews will be presented in this order:

- Air Quality Division – Alice Edwards, Director
- Environmental Health Division – Elaine Busse Floyd, Acting Director
- Spill Prevention and Response – Larry Dietrick, Director
- Water Division – Michelle Bonnet Hale, Director

Because the files are large, I've divided the four presentation into two emails, this being part 2 of 2.

I will be posting these documents to BASIS soon.

FYI, for this and all future meetings, HRES will be distributing all committee documents electronically (i.e. no hardcopy to follow).

Please let me know if you have any questions.

Thanks and regards,

Trevor Fulton

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Alaska Department of Environmental Conservation
Division of Air Quality
Overview

Presentation to House Resources Committee

January 23, 2013



Mission

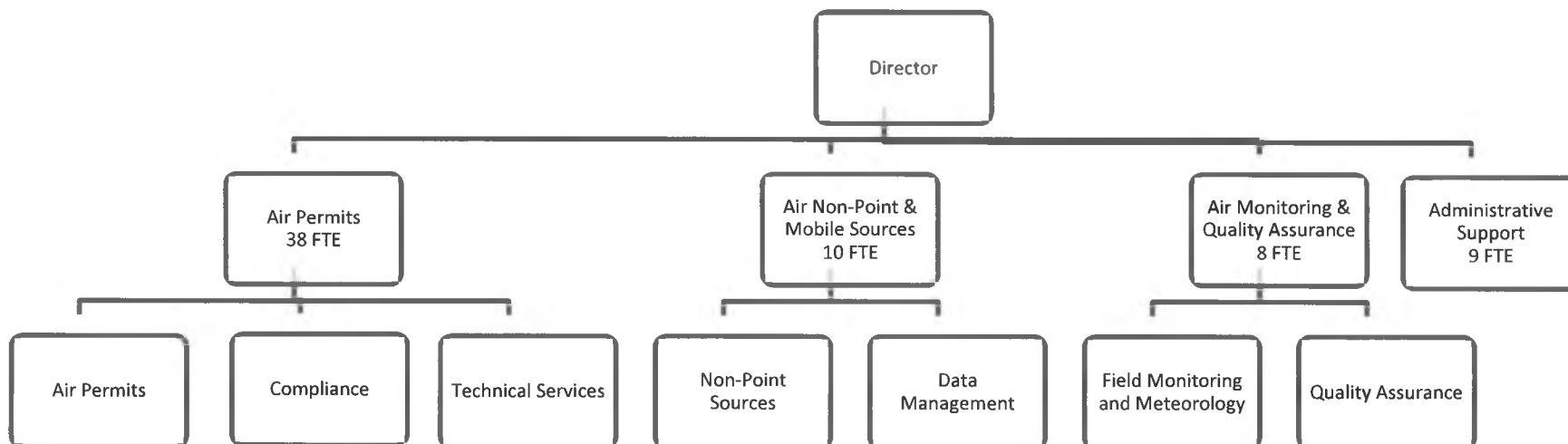
- To conserve, improve, and protect Alaska's natural resources and environment and control air pollution, in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well being.



Core Services

- Issue air quality permits to facilities that release potentially harmful pollutants
- Provide compliance assistance and enforcement (inspections and operating report reviews)
- Provide community assistance to protect air quality
- Assess and monitor air quality
- Comment on federal air quality rulemakings with Alaska's perspective
- Develop, implement, and enforce plans to bring areas out of compliance with federal air quality standards back into compliance

Air Quality Division Structure



Air Permits Program

- Ensure that air emissions from industrial operations in the state do not create unhealthy air
 - Authorize construction of new and modified facilities (Construction Permits and minor permits)
 - Establish compliance monitoring for existing facilities (Title V Operating Permits)
 - Conduct compliance assurance inspections and follow up on permit deviations
- Maintain an on-going process for improving consistency and timeliness of permitting
- Respond to general AQ complaints and concerns





Air Non-Point & Mobile Source Program

- Partner with communities to maintain and achieve ambient air quality standards by addressing non-industrial air quality concerns and developing/implementing air quality plans
- Conduct education and outreach on air quality issues to raise awareness and encourage behaviors that improve air quality
- Ensure that community-based pollution control programs incorporated into Alaska's Air Quality Plan are implemented (Fairbanks, Anchorage, Juneau)

Air Monitoring and Quality Assurance Program

- Operate and oversee air quality monitoring networks throughout Alaska. These networks assess compliance with the national ambient air quality standards.
 - Conduct or oversee required field monitoring in Anchorage, Fairbanks, Juneau, Mat-Su Valley
 - Assist communities with special monitoring studies (Seward, Galena, Soldotna, and others)
- Conduct quality assurance audits for state air monitoring network.
- Issue air advisories to inform the public of hazardous air conditions, such as wildfire smoke or volcanic ash events.
- Review industry generated data and provides technical support to air permitting.
- Provide meteorological oversight for air quality open burn approvals.



Division of Air Quality Initiatives and Challenges

Energy and Air Quality Issues

Fairbanks Fine Particulate Matter Planning

Permit Streamlining and Process Improvement

Rural Air Quality Concerns

Revisions to National Rules



Energy Choices and Air Quality

- Burning fuel (of any type) results in air pollutant emissions
- In communities, high fuel oil prices are resulting in residents turning to wood for economic space heating
 - Wood heating produces smoke that in certain locations can build to levels that exceed particulate matter ambient air quality standards, threatening human health
 - Cleaner burning, affordable fuel options could assist with maintaining health air quality
 - Cleaner burning practices and wood heating devices improves air quality
- Efforts to bring economical natural gas to Interior Alaska is important to long-term air quality

Fairbanks Fine Particulate Matter (PM_{2.5})



- Fairbanks/North Pole area exceeds the 24-hour PM_{2.5} ambient air quality standard
- Air quality attainment plan is past due to EPA
- Clean Air Act has serious consequences if fail to plan or implement a plan
- Plan and control options are controversial in community
 - Non-attainment area is large in size
 - Multiple sources of PM_{2.5} exist
 - Home heating sources (wood and coal) are important contributors



On-going Permit Streamlining and Process Improvement

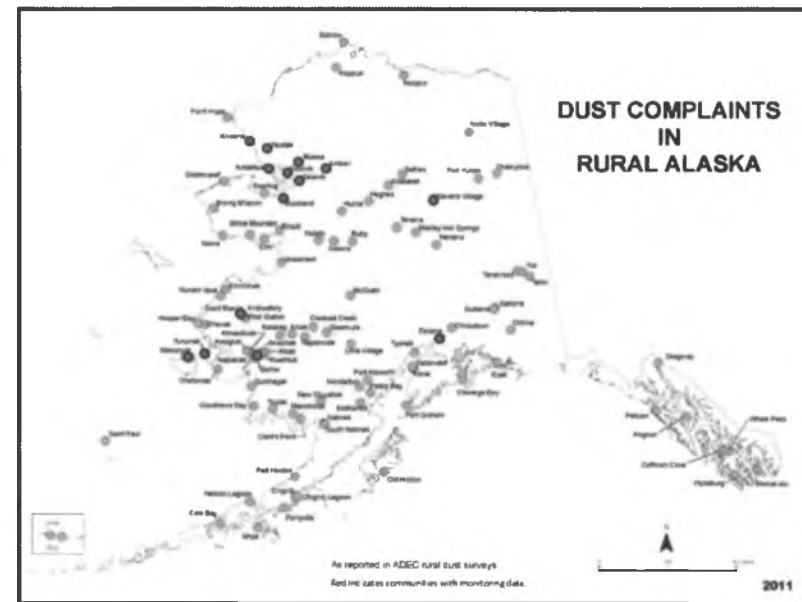
- Goal – Improve consistency and timeliness of permitting
 - Maintain high quality, legally defensible permits
 - Improve predictability by standardizing processes and permit requirements
- Quality Management System
 - enhance consistency
 - reduce disruptions from staff turnover
- Operating Permits
 - Standard conditions to improve efficiency
 - Meetings with stakeholders to discuss issues and solutions
- Construction Permits
 - Pre-application assistance and project scheduling
 - Use of contractor assistance to handle workload fluctuations
- Develop Partnerships – North Slope Assessment
 - Assessing data sources, working to fill data gaps, improve models

Rural Alaska Air Quality Concerns



Widespread impacts throughout the state make it difficult to effectively respond to the needs of communities

- Dust
- Wood smoke
- Open Burning



New and Revised Federal Standards and Rules

- Clean Air Act air quality standards and rules are being frequently updated by EPA
 - Can be difficult to keep up with the reviews of EPA proposals
 - Typical focus for comments is on technical concerns and Alaska specific issues that arise
 - Program must adjust as needed to address final rules



Engine Standards



Lead in Aviation Gasoline



1-Hour Nitrogen Dioxide
National Ambient Air
Quality Standard



Questions:

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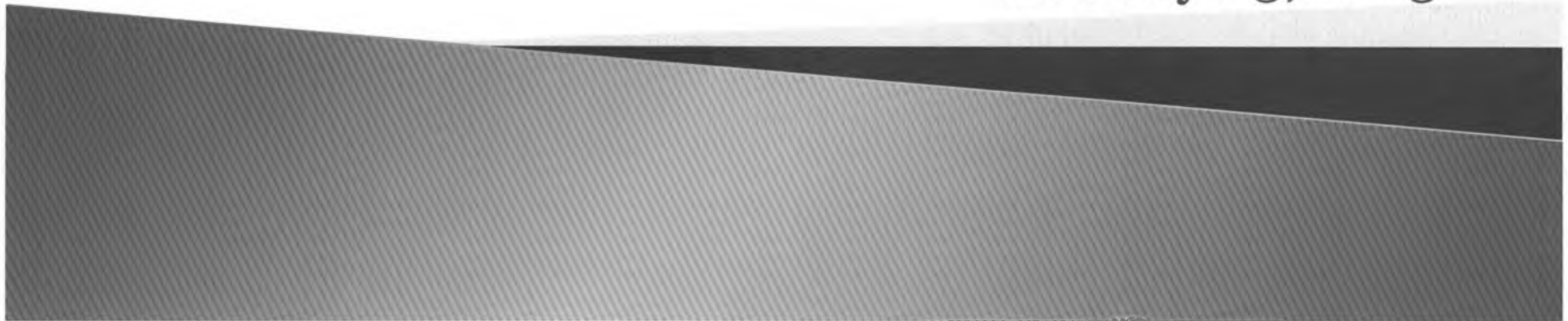


Environmental Health

Department of Environmental Conservation

House Resources Overview

January 23, 2013




Division Mission

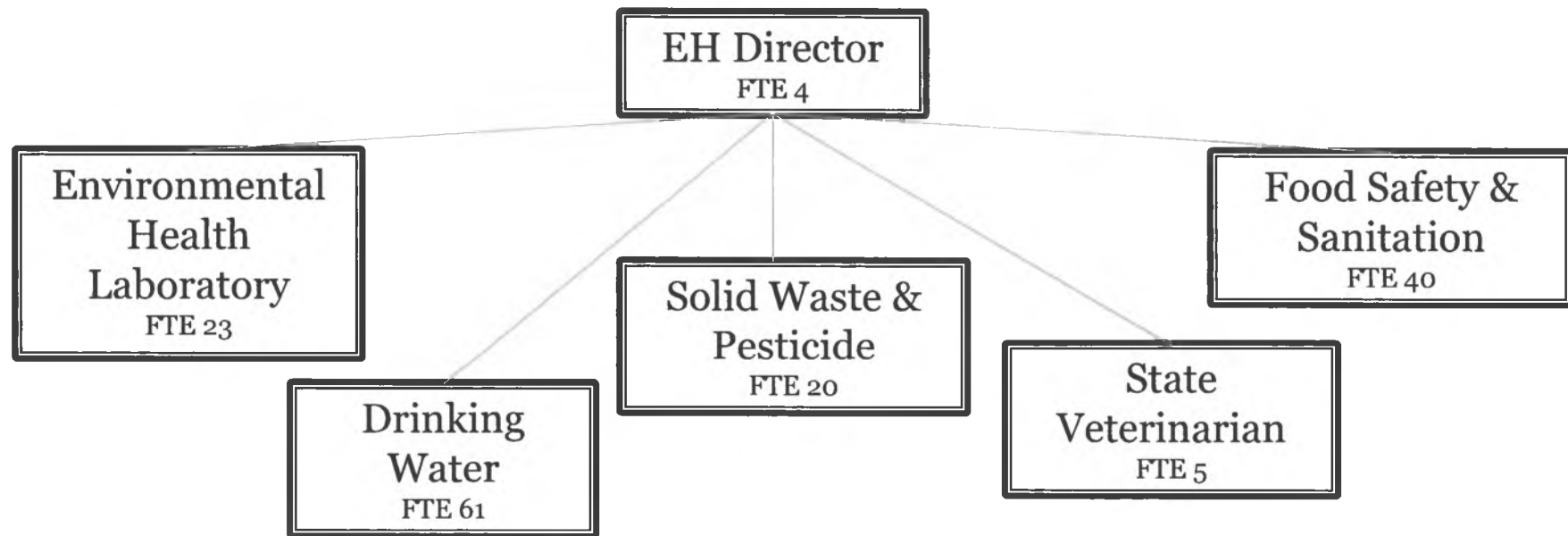
The Division of Environmental Health (EH) deals with the basics:

Safe drinking water, food, and sanitary practices.

Our goal is to provide businesses with clear standards so that they can protect our environment and provide safe food and drinking water to Alaskans.



Organization Chart



What Does the Director's Office Do?

- Oversee changes to nine regulatory chapters
- Manage budgets of each component so that resources are used wisely
- Provide clear direction to staff and timely decisions when necessary
- Ensure that statutory mandates are properly executed
- Manage the Recreational Shellfish Beach Monitoring Pilot Program
- Coordinate tsunami debris cleanup efforts for the State of Alaska



Programs

- »» Drinking Water
- Pesticide Control
- Solid Waste Management
- Food Safety and Sanitation
- State Veterinarian
- Environmental Health
- Laboratory

Drinking Water and DEC

What do we do?

- ▶ Maintain state primacy for regulating public drinking water systems
- ▶ Enforce public water system (PWS) monitoring requirements for drinking water contaminants
- ▶ Review Construction, installation and operation plans and enforce engineering standards for PWS to protect public health and meet Safe Drinking Water Act requirements
- ▶ Assist PWS owners in identifying the sources of their drinking water and help them develop strategies to effectively protect those sources from contamination
- ▶ Provide Emergency Response to help protect drinking water sources
- ▶ Provide technical and compliance assistance to PWS owners and operators, and the public



Drinking Water and DEC

Federally-Designated

Primacy since 1978

- Drinking water program executes the Safe Drinking Water Act and Amendments (currently 19 federal rules, 2 pending adoption, and 5 proposed rules).
- EPA provides over \$11 million a year to Alaska for public water systems oversight and infrastructure projects.

1,515 federally designated water systems (serve 25 people or more):

- 83% ground water
- 17% surface water
- 696 serve 25 or more persons year-round and 819 serve populations seasonally.



Drinking Water and DEC

State-Regulated

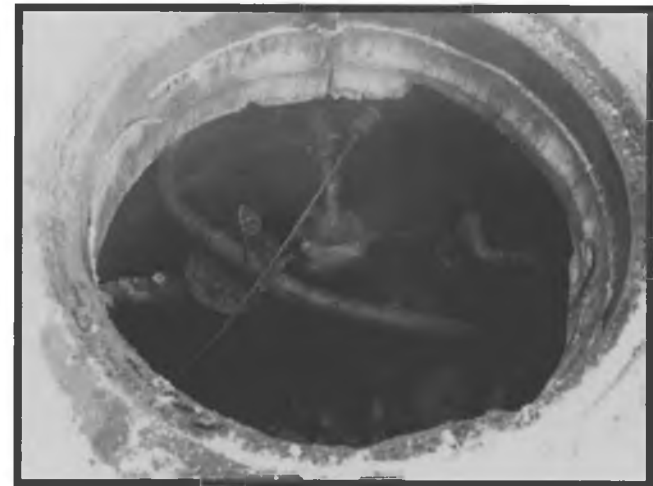
- ▶ Approximately 5,000 state regulated systems (25 people or less but greater than a private well serving a home or duplex)
- ▶ Registration, quarterly and annual testing, and construction approval required
- ▶ Serve residential care facilities, assisted living homes, child care facilities, foster homes, gas stations, office buildings, and apartments
- ▶ RSA from DHSS to work with 136 registered residential care facilities and assisted living homes



Drinking Water and DEC

Successes and Challenges

- ▶ 61 employees, 5 offices
- ▶ Increasing complexity of federal rules for both engineering and compliance monitoring
- ▶ Limited to no interaction with most state regulated systems due to lack of funding
- ▶ Empowered staff to work with water system owners and operators using a multimedia approach to help them achieve and also stay in compliance:
 - Educated consulting engineers who design water treatment systems & complete inspections and sanitary surveys
 - Mentored and network in partnership with Technical Assistance Providers Group
 - Intensive community visits and public outreach





Programs

Drinking Water

»» Pesticide Control

Solid Waste Management

Food Safety and Sanitation

State Veterinarian

Environmental Health

Laboratory

Pesticide Control and DEC

Statutory Authority

- ▶ **AS 46.03.020 (10)(F)**
 - DEC may adopt regulations necessary for ...the control of pesticides

- ▶ **AS 46.03.320 – Regulation of pesticides and broadcast chemicals**
 - Pesticide products must be registered
 - Commercial applicators must be certified
 - Spraying in public places requires notice

- ▶ **AS 46.03.330 – Public pesticide programs**
 - State and local governments must comply with regulations set forth under 46.03.320



Pesticide Control and DEC

What do we do?

- ▶ 5 employees, 1 office
- ▶ Issue permits for applications to water or aerial, and on certain state or local applications
- ▶ Conduct inspections to make sure pesticide applications comply with the pesticide regulations and worker protection standards
- ▶ Conduct inspections of pesticide distributors
- ▶ Register and monitor the distribution, sale, use, and storage of pesticides - 5,000 registered products
- ▶ Train and certify pesticide applicators
- ▶ Review pesticides for potential risks to water.



Pesticide Control and DEC

Successes and Challenges

- ▶ Implementing integrated pest management for better management of invasive species
- ▶ Implementing changes to address difficulty for DOT, DNR, and AK RR to obtain permits
- ▶ Increasing expectations for commercial applicators
- ▶ Product registration on-line





Programs

Drinking Water

Pesticide Control

Solid Waste Management

Food Safety and Sanitation

State Veterinarian

Environmental Health

Laboratory

Solid Waste Management and DEC

What we do

- ▶ Review and approve solid waste permit applications including plans for design, operations, monitoring, management, construction, and closure
- ▶ Issue permits for solid waste disposal and treatment facilities; and review monitoring results
- ▶ Inspect landfills to verify compliance with permit requirements and state solid waste regulations
- ▶ Enforce violations of permit requirements and state solid waste regulations
- ▶ Monitor closed landfill sites



Solid Waste Program and DEC Basics

- ▶ 15 employees, 3 offices
- ▶ 100% of landfills accepting 5 tons or more a day (Class I and Class II) are permitted. 23 total
- ▶ 33.5% of rural landfills (less than 5 tons) are permitted. 188 total
- ▶ 100% of industrial landfills in Alaska are permitted. 35 total
- ▶ 100% of industrial treatment facilities are permitted. 11 total



Solid Waste Program and DEC

Rural Landfill Challenges and Successes

- ▶ Proper village landfill management is difficult due to limited resources
- ▶ Compliance improvement is a significant focus of the program
- ▶ Increased outreach and technical assistance has resulted in increased permit percentage – increase from 22% in 2011 to 33.5% in 2013
- ▶ Implementing regulations in 2013 that will simplify the permit application for village landfills, increasing the number of permitted facilities and improving operations





Programs

Drinking Water

Pesticide Control

Solid Waste Management

» **Food Safety and Sanitation**

State Veterinarian

Environmental Health

Laboratory

Food Safety and Sanitation

What We Do

- ▶ Establish standards; permit, inspect and enforce standards for food processing and food service facilities
- ▶ Establish standards and inspect on a complaint basis certain public facilities for sanitation
- ▶ Provide education and training on the safe handling of food



Food Safety and Sanitation

Statutory Authority and Regulations - Food

AS 17.20 (Food, Drug, and Cosmetic Act)

- Food offered to the public or sold
- Aquatic farms
- Misbranding, incorrect labels, and false advertising
- Seafood processing

Regulatory Chapters

- 18 AAC 31: Alaska Food Code
- 18 AAC 34: Seafood



Food Safety and Sanitation

Statutory Authority and Regulations - Sanitation

AS 18.35

- Public facilities (overnight accommodations, public restrooms, smoking in public places)

AS 44.46.020

- Prevention and control of public health nuisances
- Regulation of sanitation and sanitary practices in the interest of public health at establishments in which lack of sanitation may create a condition that causes disease

Regulatory Chapters

- 18 AAC 23: hair and body art
- 18 AAC 30: sanitation (overnight accommodations, public toilets, laundromats, showers, pools and spas)



Food Safety and Sanitation

Staff and Program Elements

- ▶ 40 employees, 10 offices
- ▶ Food Establishments
 - ~ 4,642 restaurants, markets, and food processors
- ▶ Seafood & Shellfish
 - ~ 787 seafood processors and shellfish harvesters, dealers, packers
- ▶ Public Facilities
 - ~ 3,716
 - overnight accommodations
 - public toilets, showers, and laundromats
 - pools and spas
 - tattoo and body piercing shops
 - barbers, hairdressers, estheticians



Food Safety and Sanitation

By the numbers

Inspections in FY 2012

- 47% of high risk retail food establishments
- 85% of high risk seafood establishments
- 86% of tattoo and body art facilities
- 25% of pool and spa facilities

Training Food Workers

- 73% of facilities have trained staff
- Collaboration with UAF Co-op Extension to give manager training



Food Safety and Sanitation

Challenges and Highlights

- ▶ Low-risk Food regulation changes
- ▶ Conformance with Federal Requirements
- ▶ Permit Exemptions in Alaska Food Code, effective June 2012
- ▶ Inadequate Inspection Rates
- ▶ Collaboration with UAF Cooperative Extension – Test Kitchen, Certified Food Protection Manager & Cottage Foods
- ▶ Outreach – ASGA, SARDFSA, AFSAC, ASPAC





Programs

Drinking Water

Pesticide Control

Solid Waste Management

Food Safety and Sanitation

»» State Veterinarian

Environmental Health

Laboratory



State Veterinarian

Statutory Authority

▶ **AS 03.05.011**

- examine, inspect, test, quarantine or embargo animals or animal products to prevent the spread of pests or contagious or infectious disease.

▶ **AS 03.55.100**

- establish minimum standards for animal care

▶ **AS 17.20.005**

- Grading of milk & milk products, set standards of sanitation for dairies offering or selling to the public which are equal to the minimum standards of the U.S. Pasteurized Milk Ordinance.



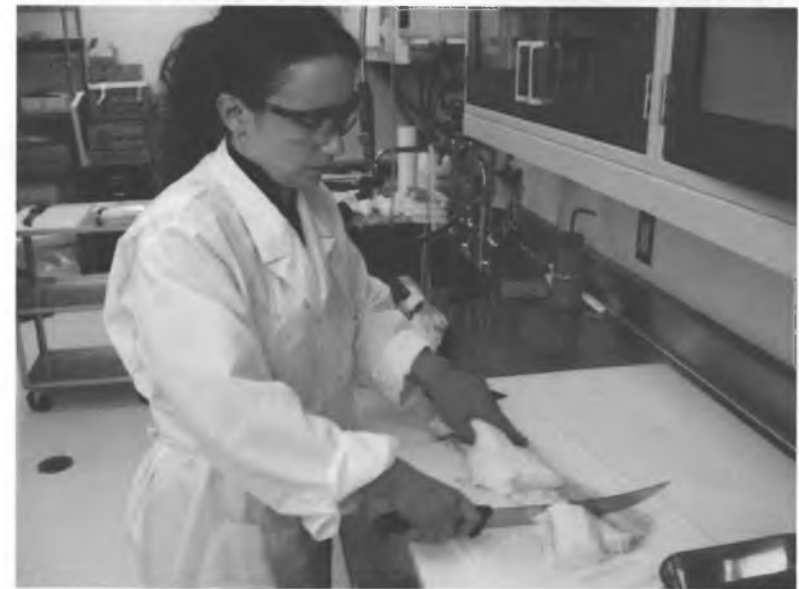
Regulatory Chapters:

- 18 AAC 32 Milk, Milk Products & Reindeer Slaughter
- 18 AAC 36 Animal Health

State Veterinarian

What do we do?

- ▶ 5 employees, 2 offices
- ▶ Permit, inspect, monitor and provide technical assistance to dairy and livestock producers
- ▶ Permit and monitor the movement of animals and animal biological products (vaccines, etc)
- ▶ Surveillance and control of animal diseases
- ▶ Respond to animal health emergencies
- ▶ Collect fish samples statewide and evaluate them for contaminants



State Veterinarian

Successes and Challenges

- ▶ Maintaining State's disease-free status, allowing easy international and interstate animal transport; decreasing testing burden on producers
- ▶ Helping commercial and private animal owners keep animals healthy & free of disease.
- ▶ Collaboration with USDA to develop a blood test for reindeer for TB, more efficient and less costly than the skin test.



State Veterinarian

Successes and Challenges

- ▶ Working with USDA on validation of the AK Chronic Wasting Disease Herd Certification Program.
- ▶ Working with UAF on the development of a veterinary program.
- ▶ Collaboration with Cooperative Extension Service to permit a vat pasteurizer in the UAF test kitchen.
- ▶ Permitted new dairy processing facility in the Matanuska Valley.



Programs

Drinking Water

Pesticide Control

Solid Waste Management

Food Safety and Sanitation

State Veterinarian



Environmental Health
Laboratory



Environmental Health Laboratory

What we do

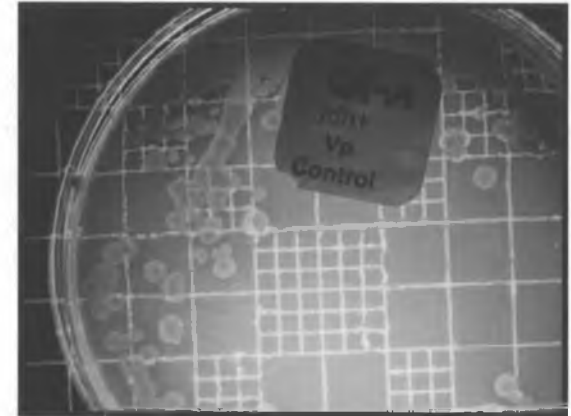
- ▶ 23 employees, one location
- ▶ Inspect, evaluate, and certify 88 private laboratories to perform compliance/regulatory testing for drinking water, contaminated sites, and dairy.
- ▶ Provide laboratory testing service for assessment of risks to public health, welfare and the environment:
 - food safety (manufactured food, shellfish, produce, and food borne illness investigations)
 - drinking water
 - animal health (domestic and wild animals)
 - dairy
 - contaminant monitoring (fish tissue monitoring)
 - air filters
- ▶ Provide technical assistance to other programs regarding the acquisition, facilitation, interpretation of analytical data.
- ▶ Performed 61,967 testing processes in SFY 2012
- ▶ Extensive federal certifications from EPA, FDA, USDA that include 7 different federal programs



Environmental Health Laboratory

Successes and Challenges

- ▶ In-state testing avoids time delays and cost of shipping
- ▶ Offers services not provided by private sector (some because federal law mandates gov't lab)
- ▶ Developing new methods that are faster (24 hour turn around compared to 5 days), instruments that increase capacity and reduce labor, and moving at the speed of commerce.
- ▶ SFY 2013-Awarded FDA grant to obtain ISO 17025:2005 accreditation for Food Testing. Maximum 5 years and \$1.5M
- ▶ SFY 2013-Resumed EIA and Johne's testing, added line of produce testing, and beginning transition of PST testing to instrument method from the mouse bioassay.



Tsunami Marine Debris

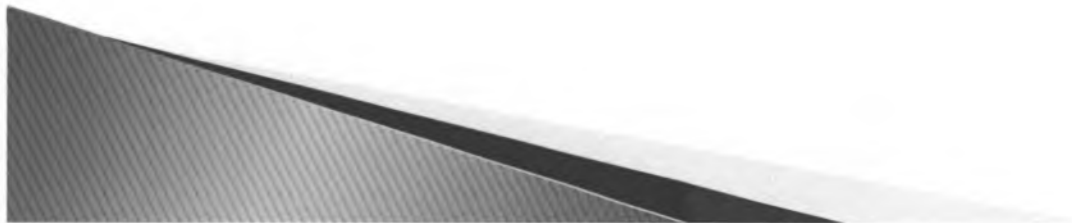
- ▶ Devastating March 2011 earthquake and tsunami; Government of Japan estimates 1.5 million tons of debris caught by wind and ocean currents, heading across Pacific Ocean; Admin Order 203 by Governor Parnell designated DEC lead agency for a coordinated, multi-agency effort related to tsunami-generated marine debris.
- ▶ Composition – Styrofoam, buoys, bottles, small household appliances, rigid urethane insulation and wood from destroyed buildings and homes, fishing and boating docks, bumpers, nets
- ▶ Concerns related to tsunami debris – potential toxicity of components, smothering sensitive habitats, invasive species, impact of small Styrofoam pieces on marine and terrestrial life, unknown quantity or composition, disposal, safety risks to removal crews

Tsunami Marine Debris



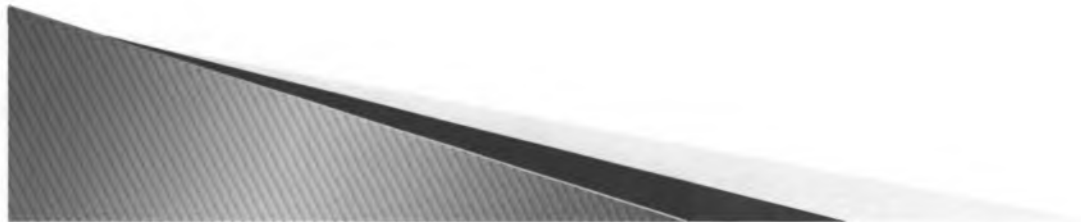
Tsunami Marine Debris

- ▶ Aerial survey for baseline data – 8000 pictures, over 2000 miles of coastline surveyed, individually graded for debris density and type of debris
- ▶ Alaska demonstrated significant debris arrival, treacherous, difficult to access, and extensive coastline. 10-fold increase in apparent tsunami-generated debris
- ▶ Ongoing coordination with NOAA, State & Federal land and animal managers; prioritization and planning meeting January 17, 2013 in preparation for the 2013 field season for debris removal.
- ▶ Generous gift of \$5 million from GOJ to US; funding to 5 states based on an initial, small, equal allocation, then need-based approved by NOAA review team.



Questions?

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Alaska Department of Environmental Conservation

Division of Spill Prevention and Response Mission

Protect public health and the environment through prevention, preparedness and response to oil and hazardous substance releases.



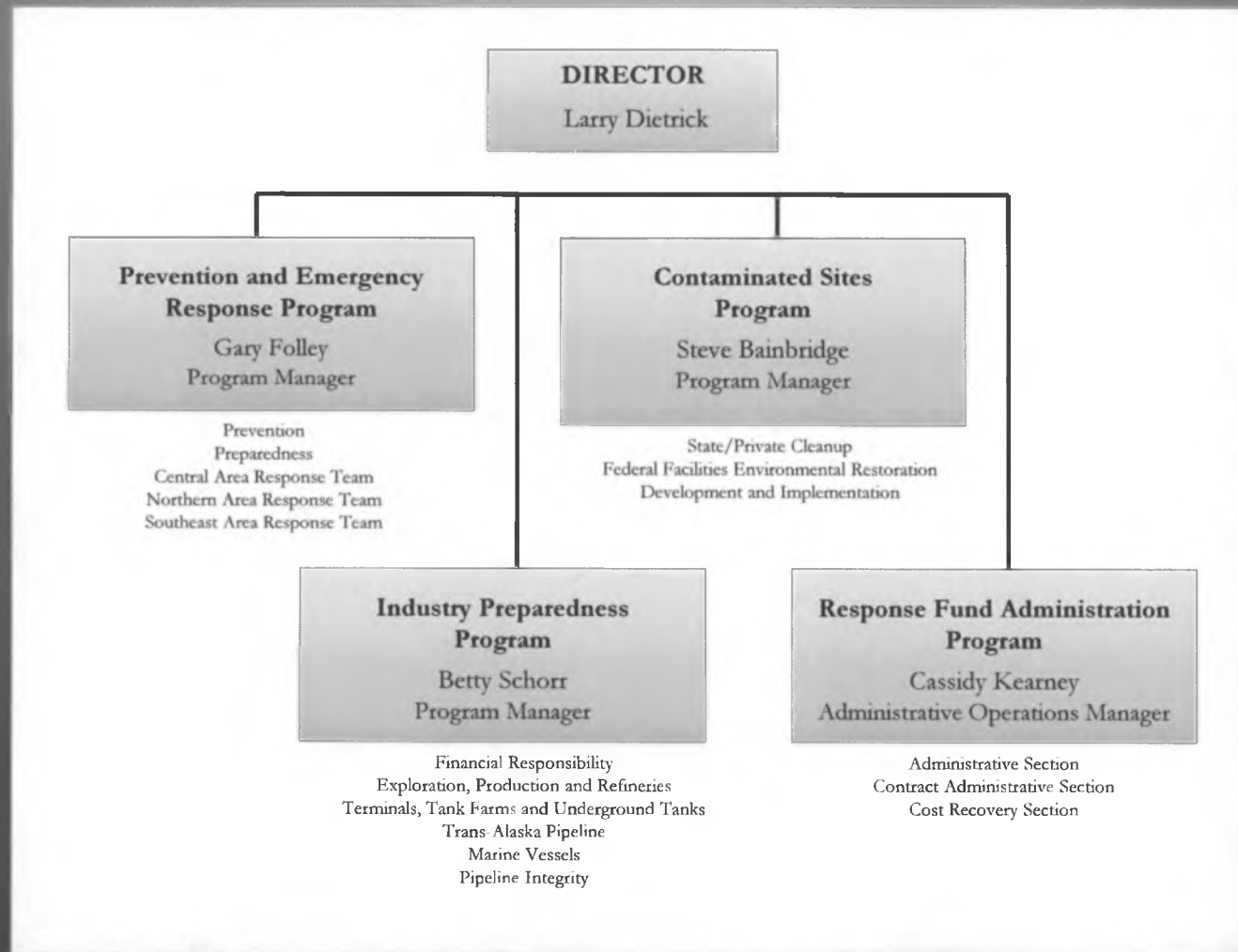
Prevention

Preparedness

Response

Contaminated Sites Cleanup

Spill Prevention and Response Organization



Qualifications

- Senior Leadership
 - Director
 - Four Program Managers
- Total years of experience: 159
- Average years of experience: >31 years
- Education: PE-Civil Engineering; MBA; BS-Environmental Management; BS-Biology; MS-Environmental Quality Sciences; BA Biology; USCG Officer Candidate; Local government and private sector experience
- Job classes
 - Environmental Specialists
 - Environmental Engineers
 - Environmental Technicians
 - High School and College Interns

Prevention and Emergency Response Program

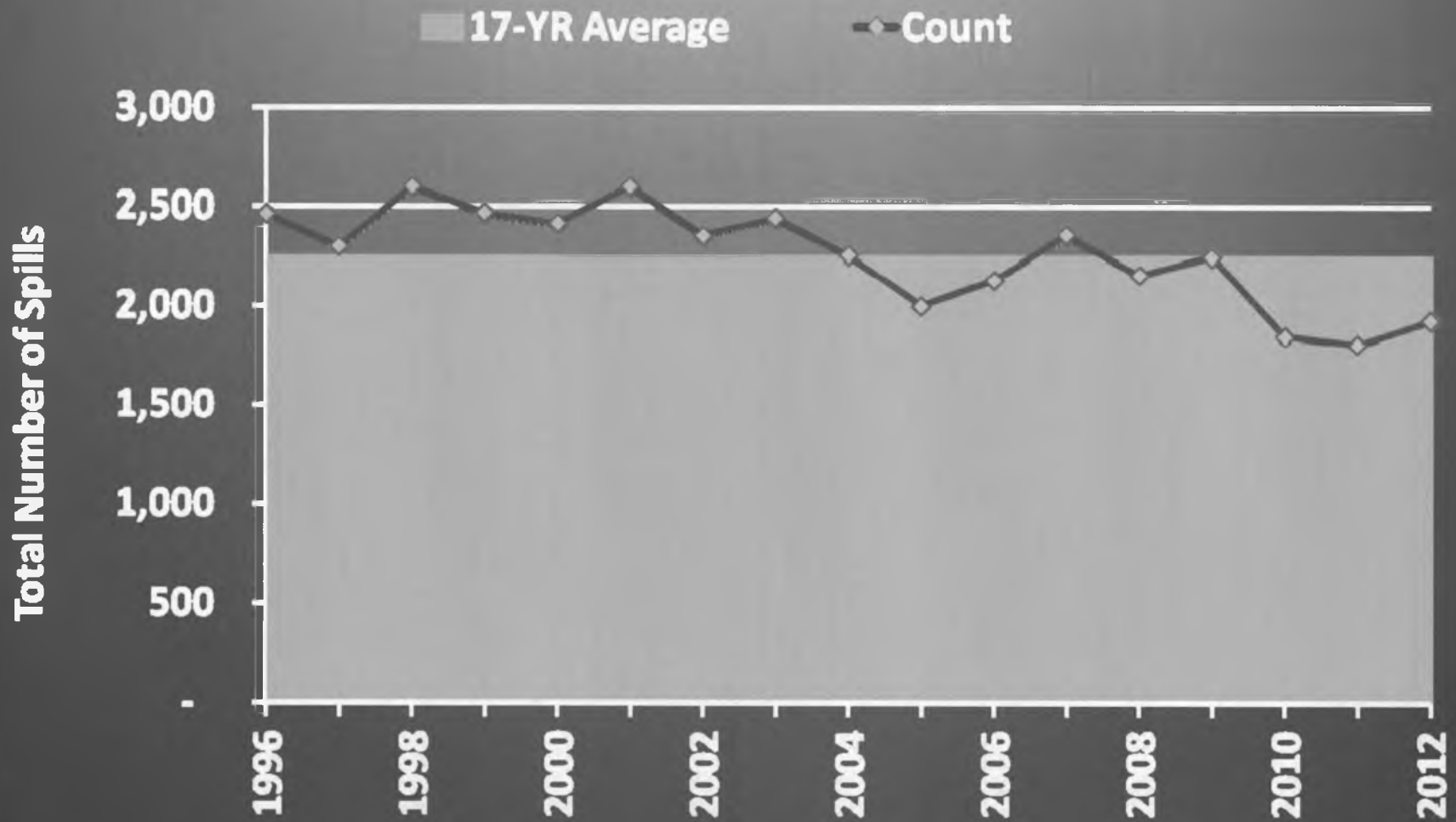
Mission

Protect public health and the environment by responding to oil and hazardous substances releases to ensure cleanup, mitigation of impacts and restoration of damaged resources.

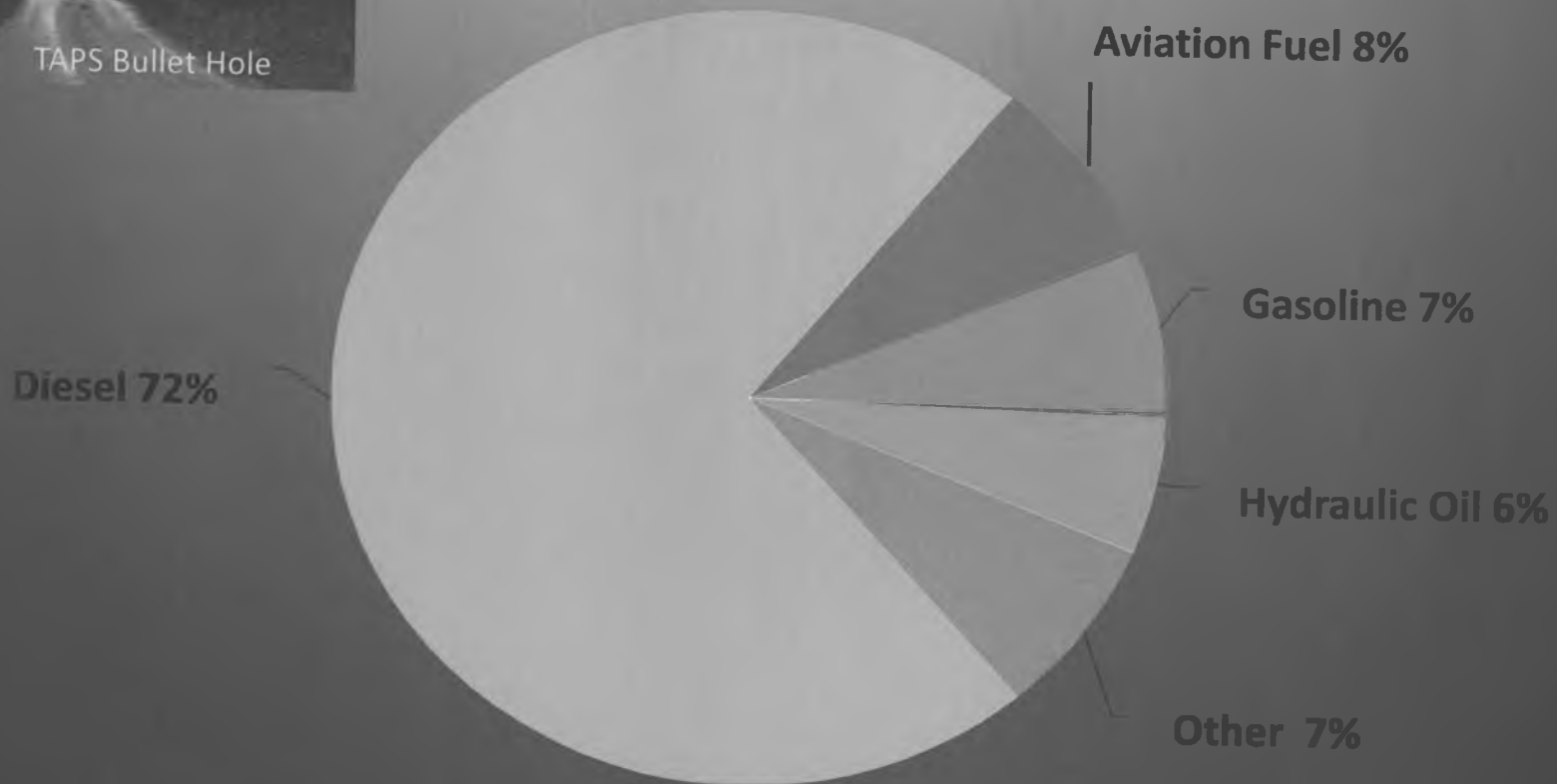


Total Number of Spills by Fiscal Year

(FY 1996-2012)



Volume Released by Product



Prevention and Emergency Response Responsibilities

- **Emergency Oil Spill Response**
- **Statewide Hazmat Response**
 - **Drills and Exercises**
- **Government Oil Spill Response Plans**
 - **Local Spill Response Agreements**
 - **Disaster Response Coordination**

Emergency Response Team Areas



Statewide Hazmat Response Teams



Statewide Hazmat Response Work Group



Homeland Security



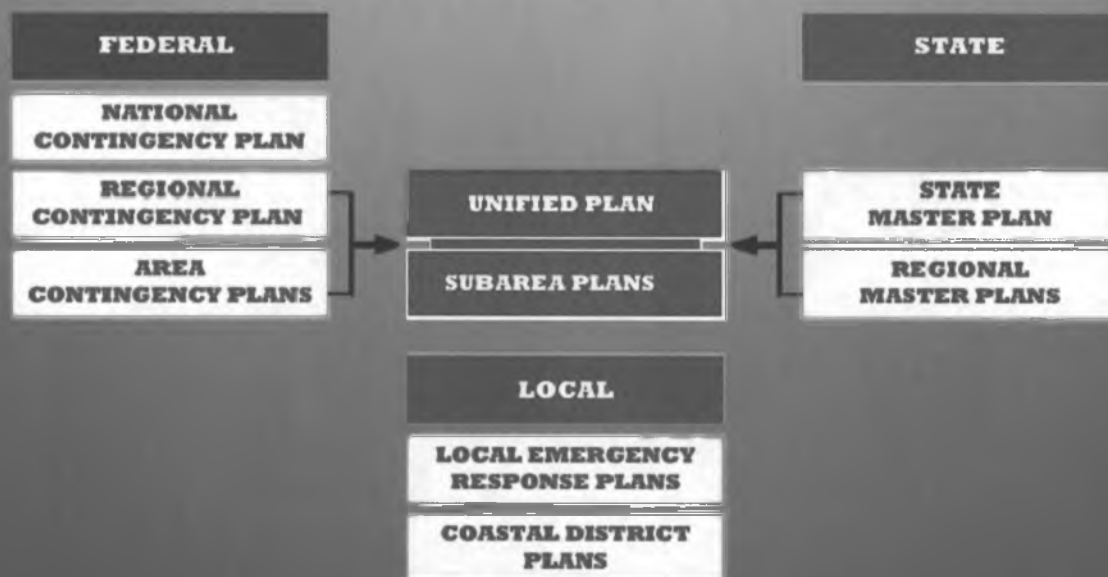
AK Dept of Labor & Workforce Development



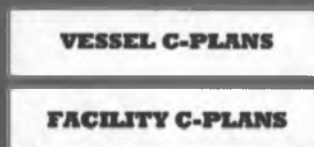
Eielson AFB Fire/Hazmat

Oil Spill Response Plans

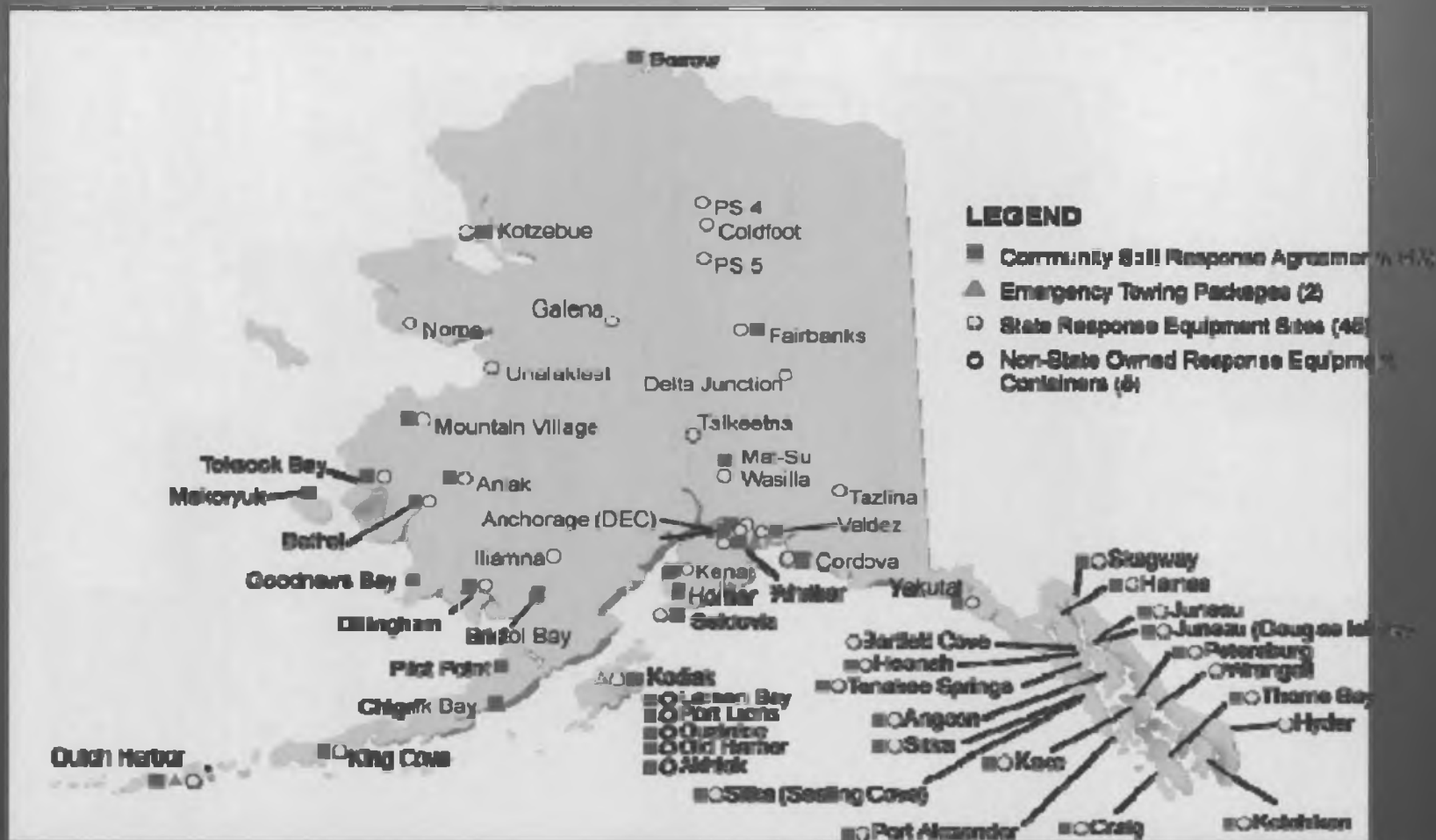
Government Spill Planning



Industry Spill Planning



Local Spill Response Agreements and Equipment



Prevention and Emergency Response Activities

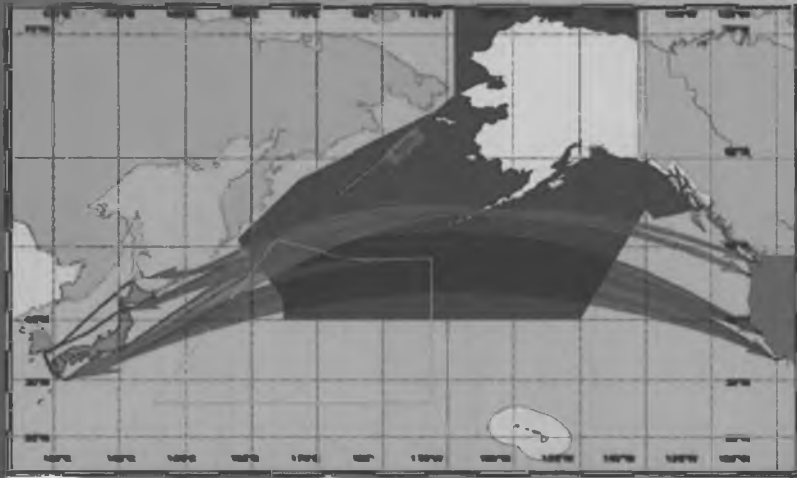
- 821 responses out of 1,888 reported spills
- 23 significant oil and hazardous substance spills
- 30 oil spill drills and exercises
- Alaska Shield 2012 Hazmat Symposium
- 72 Geographic Response Strategies
- Unified and Subarea Response Plans updates
- Vessel risk assessments for SE, Cook Inlet and the Aleutians
- Arctic offshore drilling and Arctic shipping preparedness

Alaska's Ocean Area



Shipping Regions

Great Circle Shipping Routes



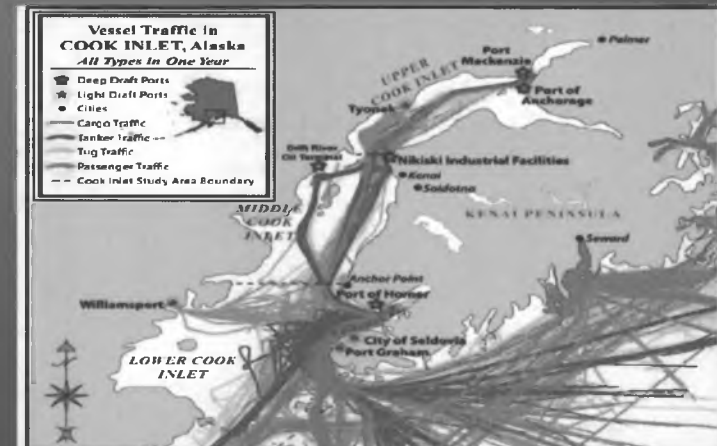
Arctic Shipping Routes



Southeast Shipping Region



Cook Inlet Shipping Region



Response Challenges

Operational conditions - extreme weather, wind, tsunamis, floods, earthquakes, lahars, temperature, fog, darkness, permafrost, ice, sea states, remote geographic areas

Logistics - distances to response assets, including vessels, aircraft, ports, harbors, airfields, lodging, remote access, road less coastlines, minimal communications

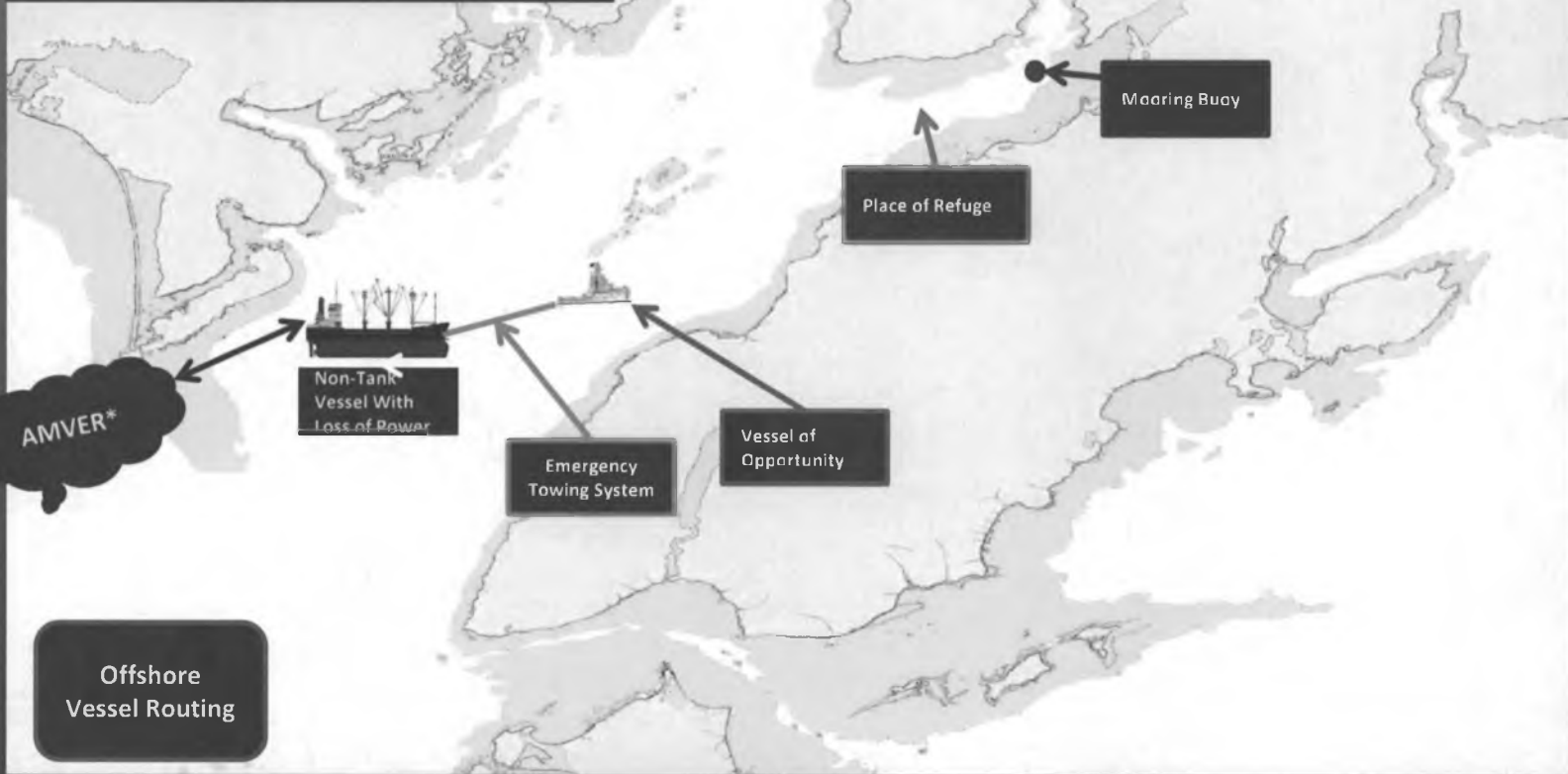
Risks - marine vessel casualties, aging oil infrastructure, offshore drilling, Arctic pipelines, leaking underground storage tanks, groundwater contamination

Expectations – Respond 24/7 to any spill in any location at any time

Maritime Casualties



Alaska Vessel Rescue System



*AMVER- Automated Mutual-Assistance Vessel Rescue System

Incidents



Disaster Coordination

Yukon Breakup Flooding - Eagle



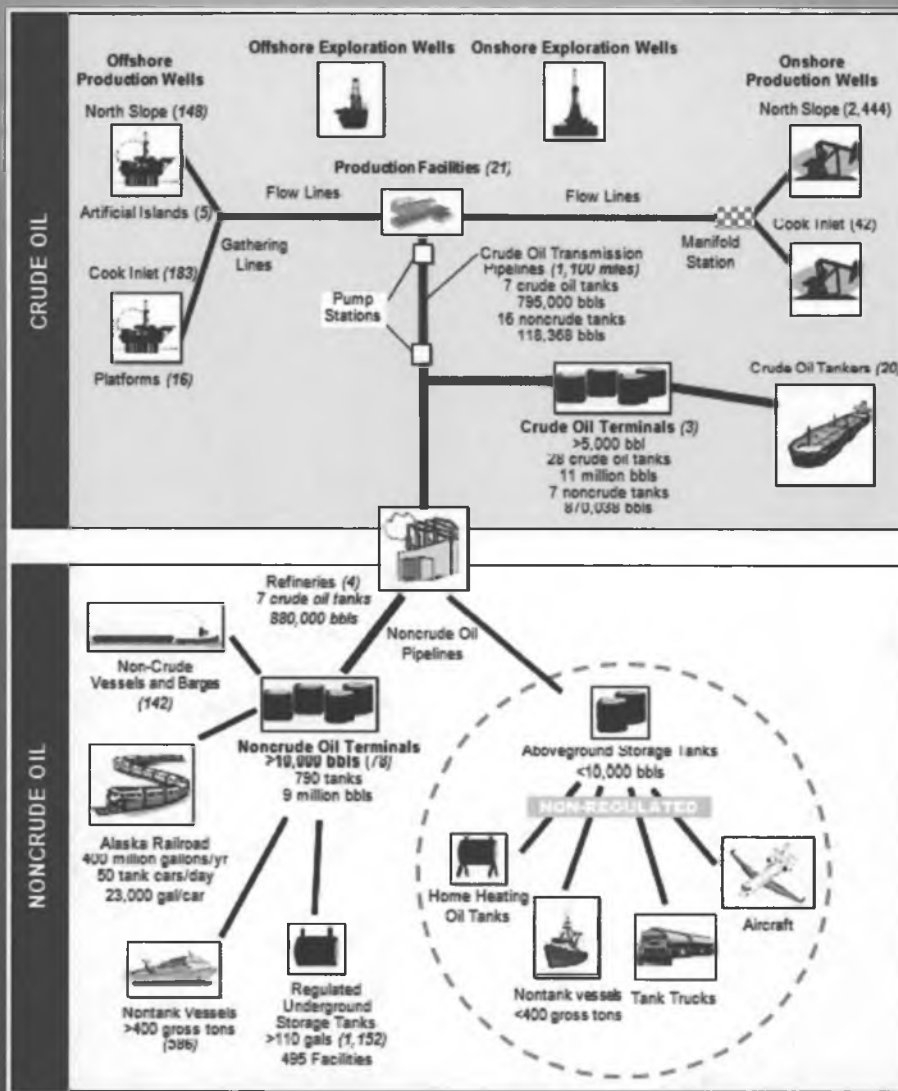
Industry Preparedness Program

Mission

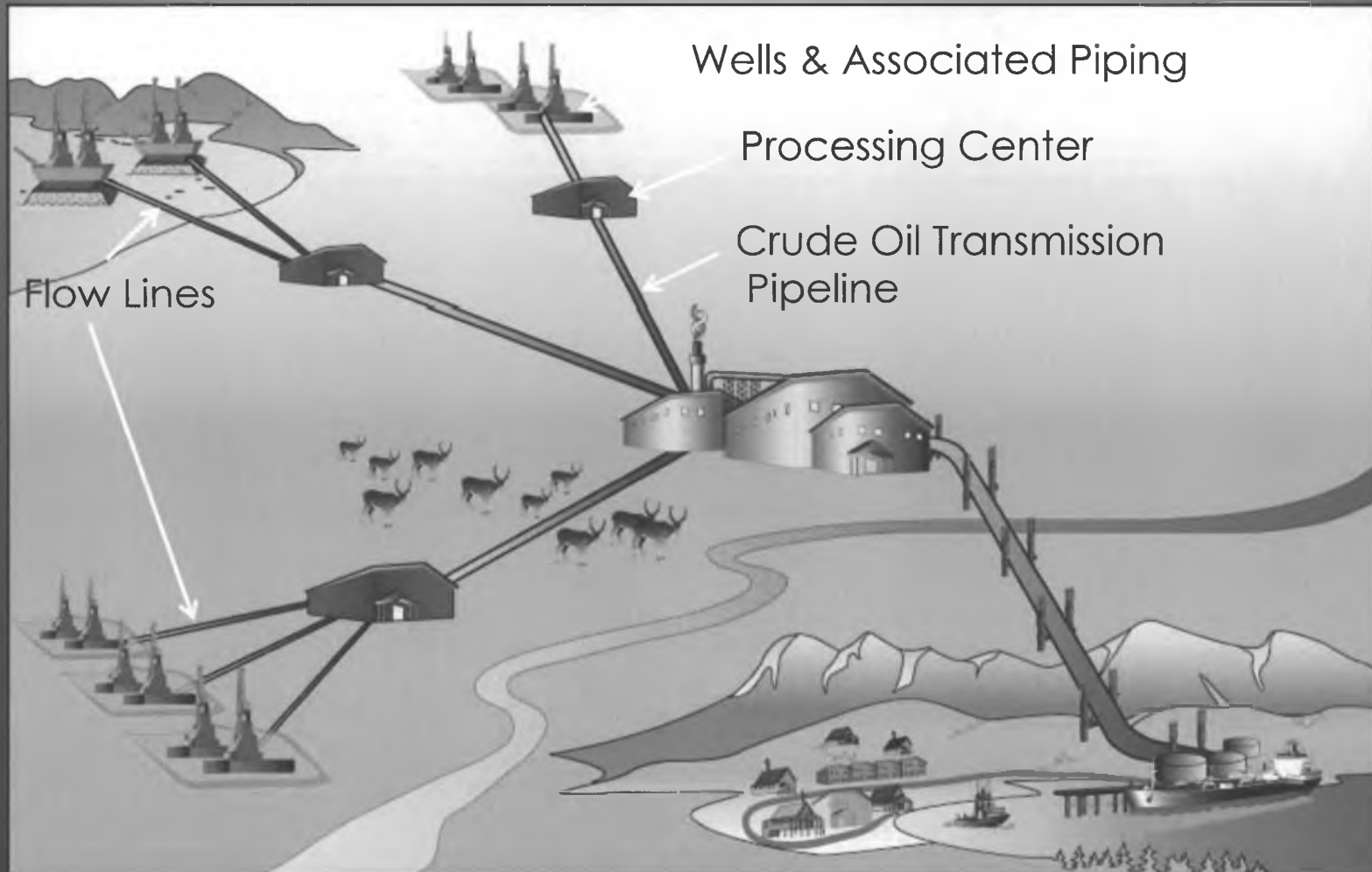
Protect public health and the environment by ensuring that producers, transporters and distributors of oil prevent spills and are prepared materially and financially to respond and clean up.



Oil Production, Storage and Transportation Infrastructure

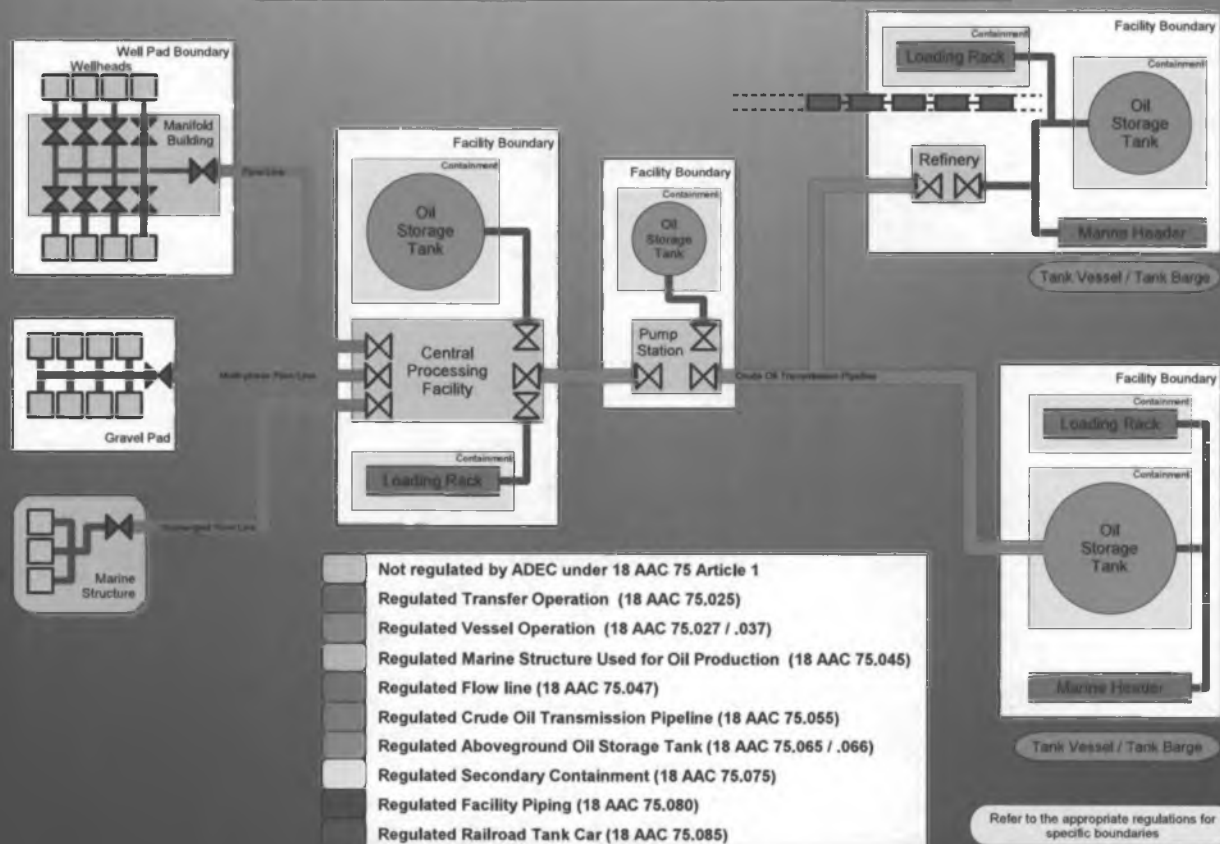


Pipelines of Interest

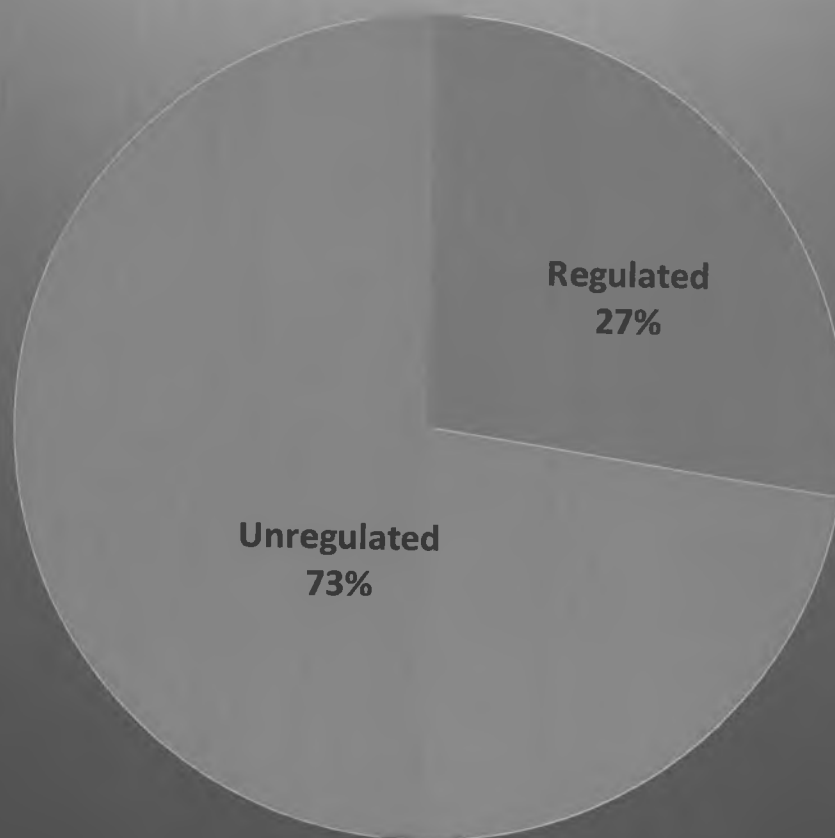


Regulated Facility Components

18 AAC 75 Article 1 Regulatory Boundary Examples



Spills at Regulated versus Unregulated Facilities



Industry Preparedness

Responsibilities

- Oil spill contingency plans
- Spill drills
- Inspections
- Financial Responsibility
- Oil spill primary response action contractors
- Best available technology



Regulated Facilities



Drills and Oil Spill Cooperatives



Offshore Drilling



Industry Preparedness Activities

- 633 contingency plan actions
- 79 inspections of regulated facilities
- 38 industry spill exercises
- 68 underground storage tanks repairs
- 254 underground storage tank inspections
- Pipeline Leak Detection Technology Conference
- 103 pipeline engineering review and inspections



Aging Infrastructure Inspection and Replacement



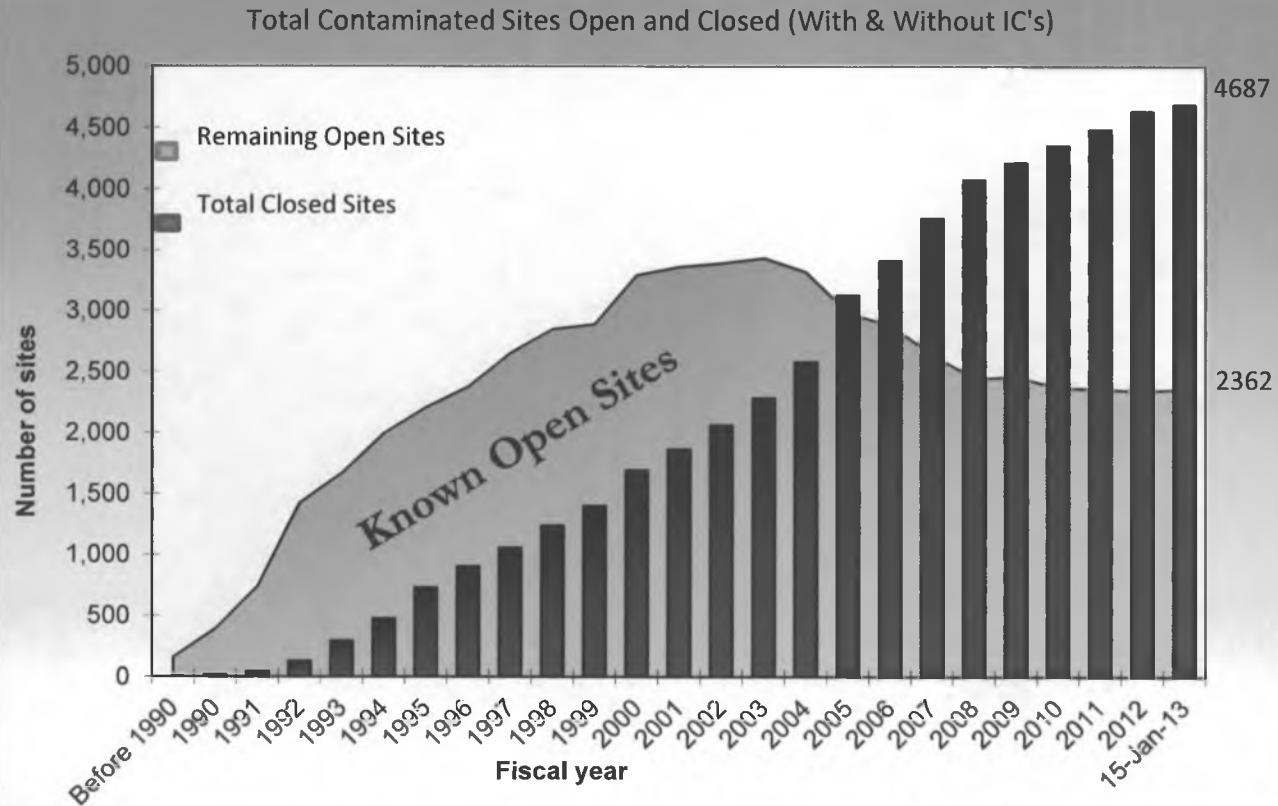
Contaminated Sites Program

Mission

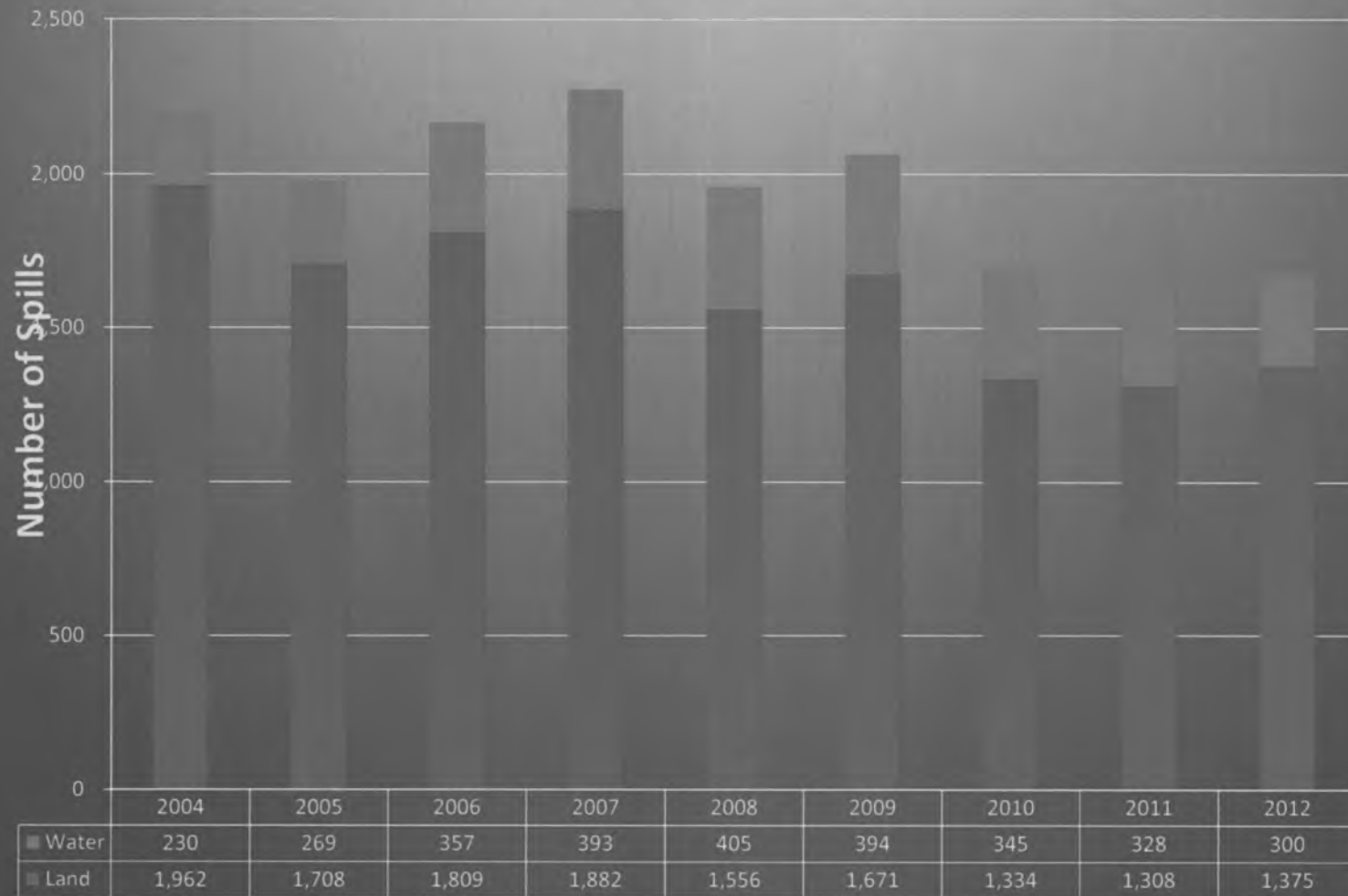
Protect public health and the environment through assessment, clean up, monitoring and redevelopment of contaminated sites in Alaska.



Open versus Closed Sites Cumulative



Spills to Land and Water (FY 2004-2012)



Umiat Drums

1963



Legacy of Contamination

Total Sites = 6,730

New Spills,
Releases
3%

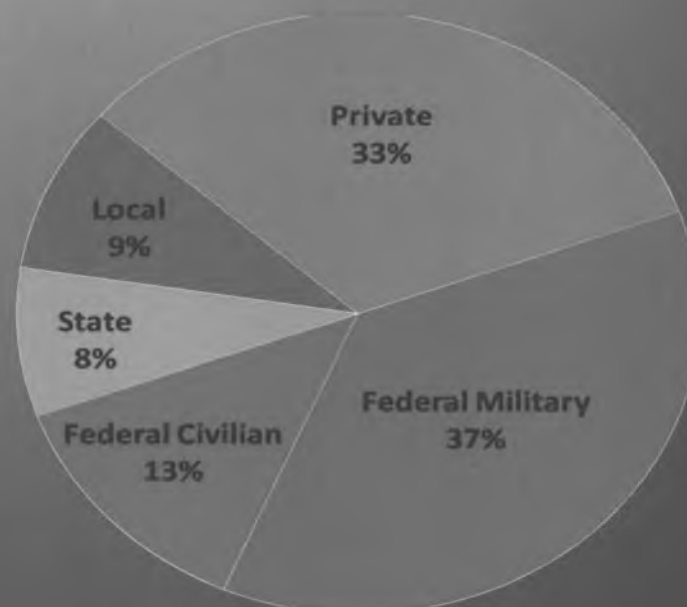


Historic Spills
97%

LEGACY CONTAMINATION SOURCES

- Mining
- Logging
- Fuel Storage
- Cold War
- World War II
- Oil Development
- Underground Storage Tanks
- Seafood Processing
- Federal Facilities and Oil Wells

Contaminate Type and Ownership



Federal Facilities

SOC Opportunities for Partnership

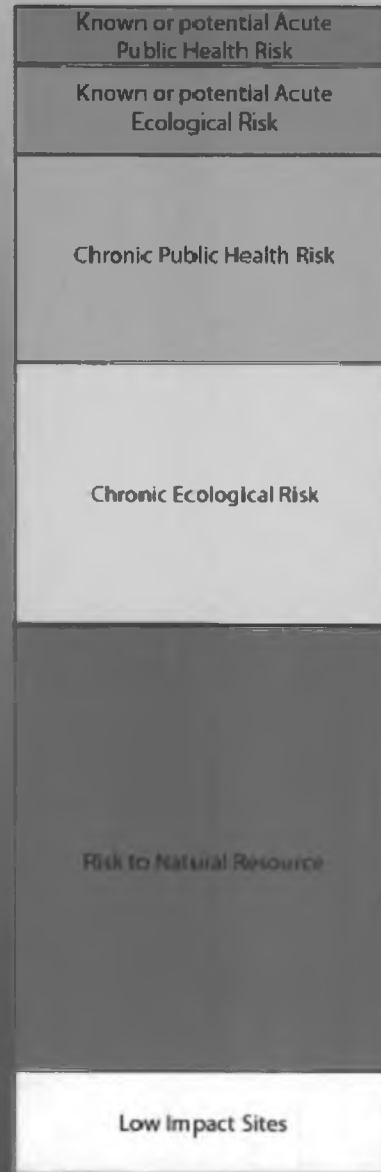


Contaminated Sites

Responsibilities

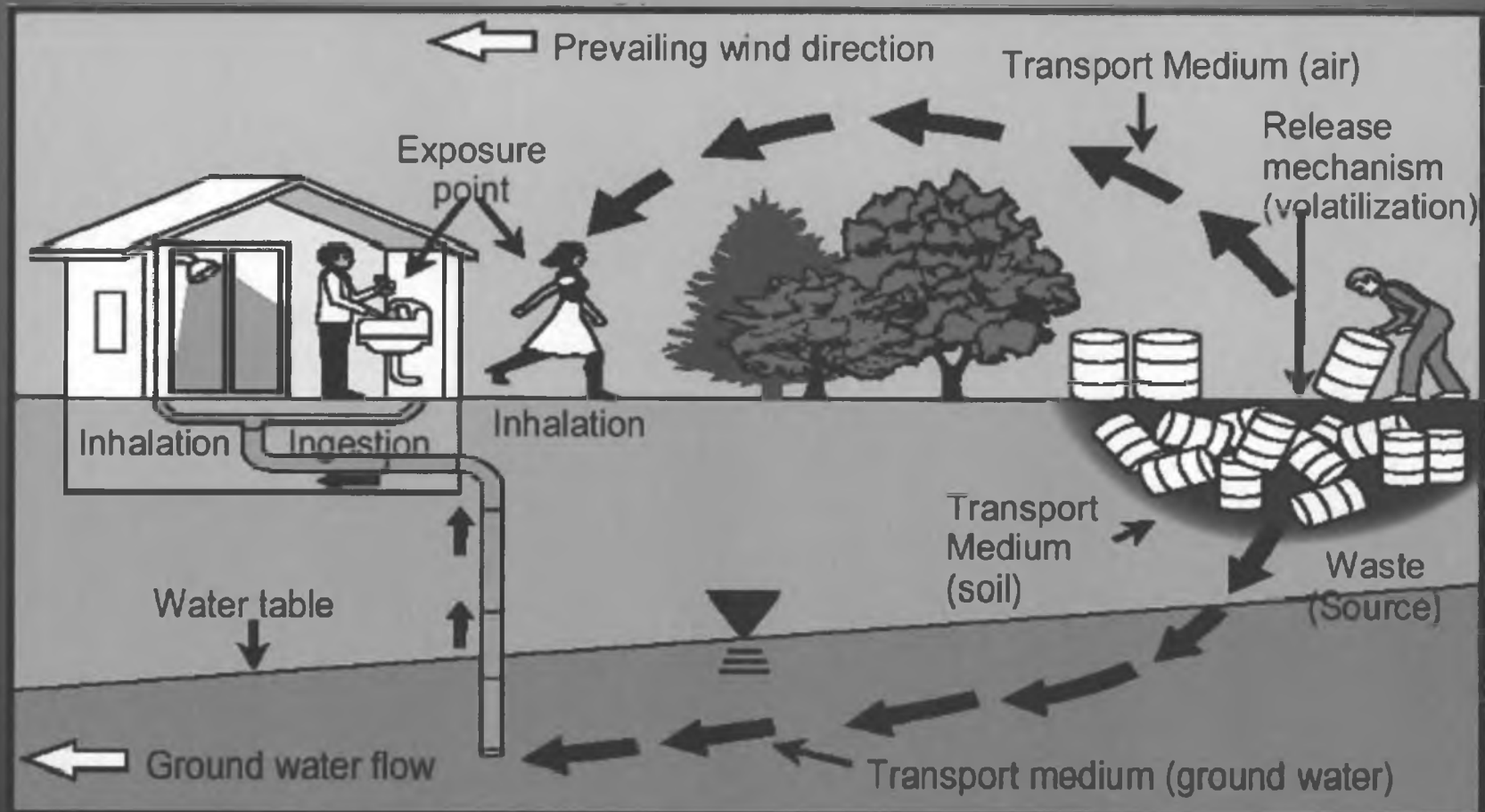
- Contaminated site management
- Cleanup of state, federal and private contaminated sites
 - Areawide cleanups
 - Reuse and redevelopment
 - Risk-based cleanups
 - Cleanup standards

Risk Continuum



**Majority of CS
Sites**

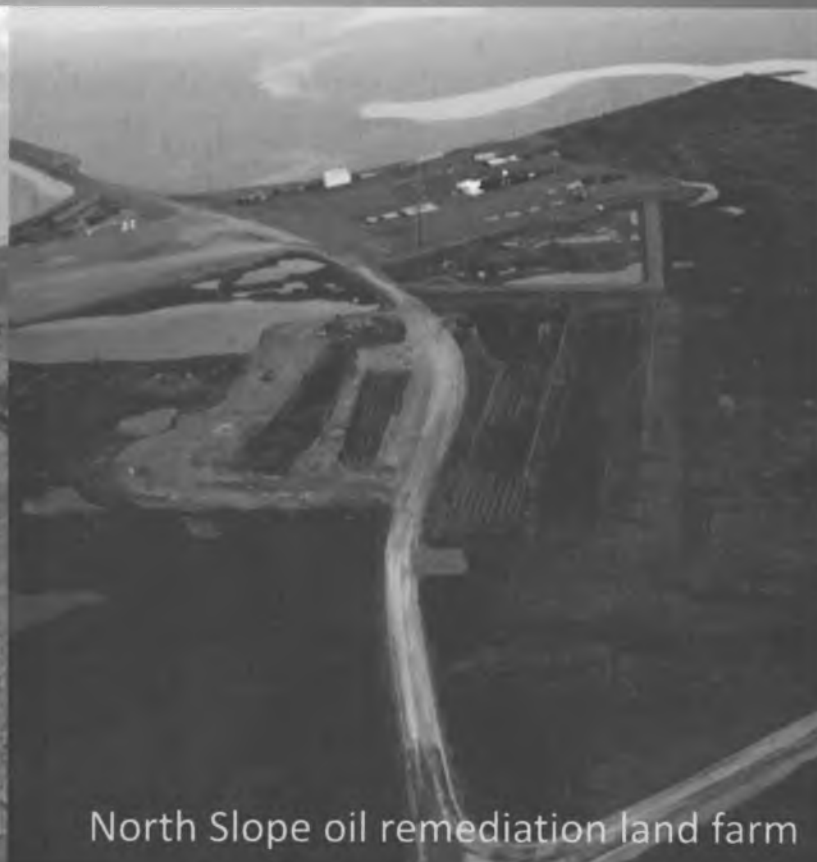
Exposure Pathways



Contaminated Site Remediation



Cook Inlet groundwater intercept



North Slope oil remediation land farm

Contaminated Sites

Activities

- 1,205 sites - assessment, cleanup and monitoring
- 154 sites with risk reduction measures implemented
- 161 new site assessments and risk evaluations
- 19 Brownfield assessment and cleanup projects
- Areawide groundwater investigations
- Contaminates of concerns – solvents, sulfolane

Abandoned Drums and Bunker Tanks



Areawide Contamination



Response Fund Administration Program

Mission

Manage the Oil and Hazardous Substance Release Prevention and Response Fund as a sustainable funding source for the state's spill prevention and response programs.



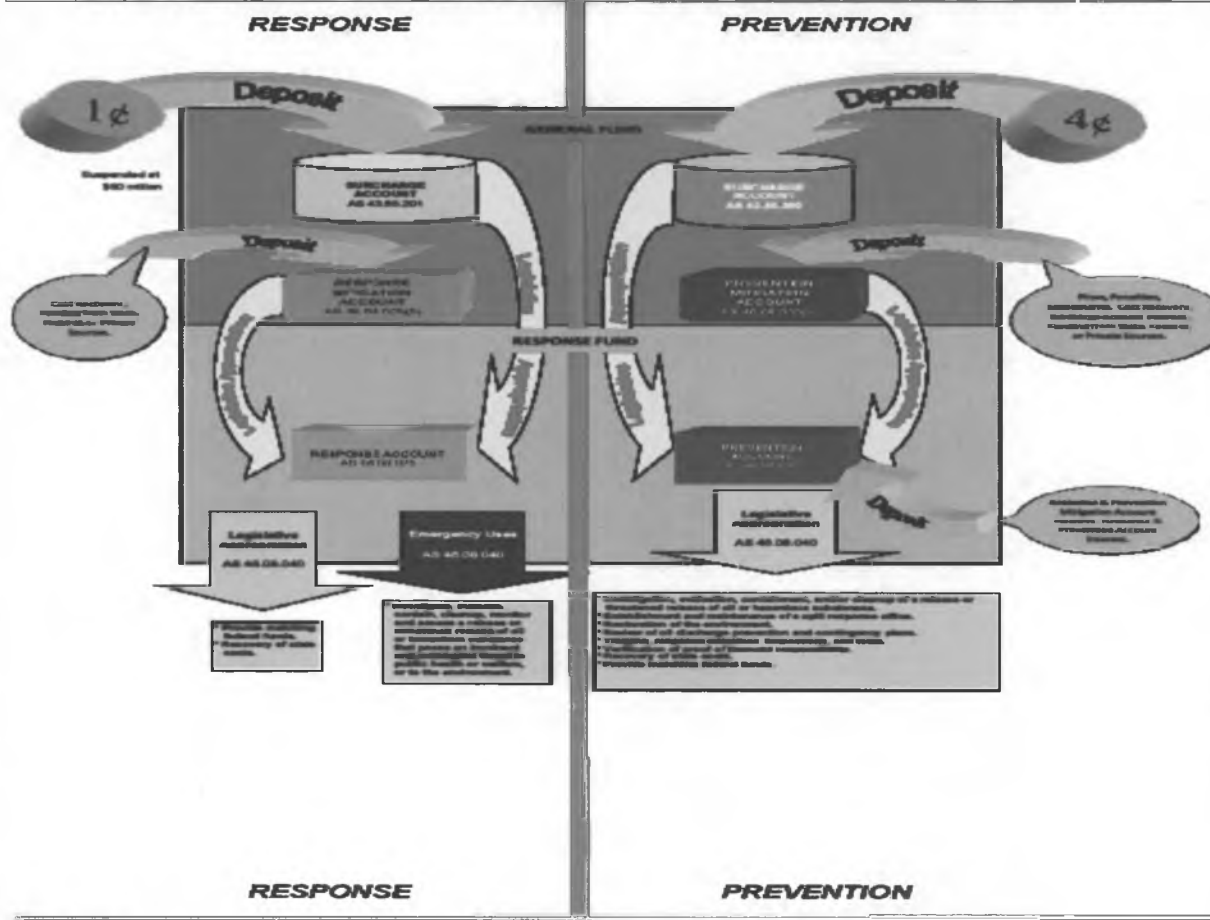
Response Fund Administration

Responsibilities

- Response Fund Management
 - Cost recovery
 - Contract Management
- Emergency response – Finance Section
 - Biennial Response Fund Report
- Information and database management

Response Fund

Oil & Hazardous Substance Release Prevention and Response Fund



Revised 11/18/99

Response Fund Administration Activities

- Oil and Hazardous Substance Release Prevention and Response Fund management
- \$2.7 million recovered from 1,756 responsible parties
- \$4.2 million in state contracts for assessment and cleanup
- \$3.3 million in reimbursable services agreements
- \$6.4 million in 21 federal grants
- 11 term contracts and 100 Notices to Proceed

SPAR Initiatives

- Arctic Council - Arctic Nation Response Agreement and Prevention Project
- USCG Incident Specific Preparedness Review of the Macondo Spill
- Pacific Northwest Economic Region Arctic Caucus Oil Spill Task Force
- Northern Waters Task Force
- Aleutian Islands Risk Assessment, Bering Strait Port Access Route Study, Southeast Vessel Traffic Study, Cook Inlet Risk Assessment
- Pacific States/British Columbia Oil Spill Task Force
- Pipeline Leak Detection Best Available Technology Conference
- Arctic Pipeline Technology Forum
- Emergency Towing System
- New contaminants of concern
- Vapor Intrusion

Questions?

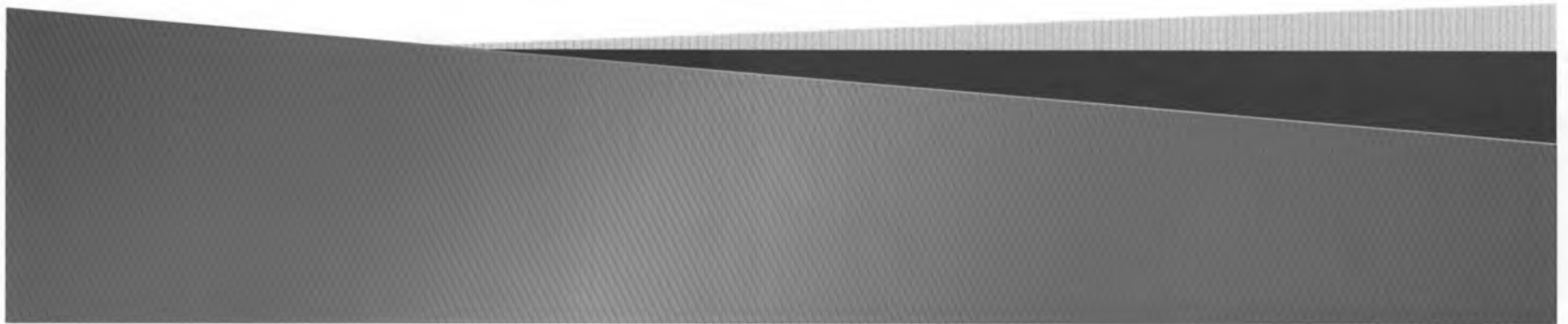


TAPs Pipeline

Division of Water

Department of Environmental Conservation

House Resources Committee, January 23, 2013



Division of Water – Mission

Protect water quality and assist communities in improving sanitation conditions

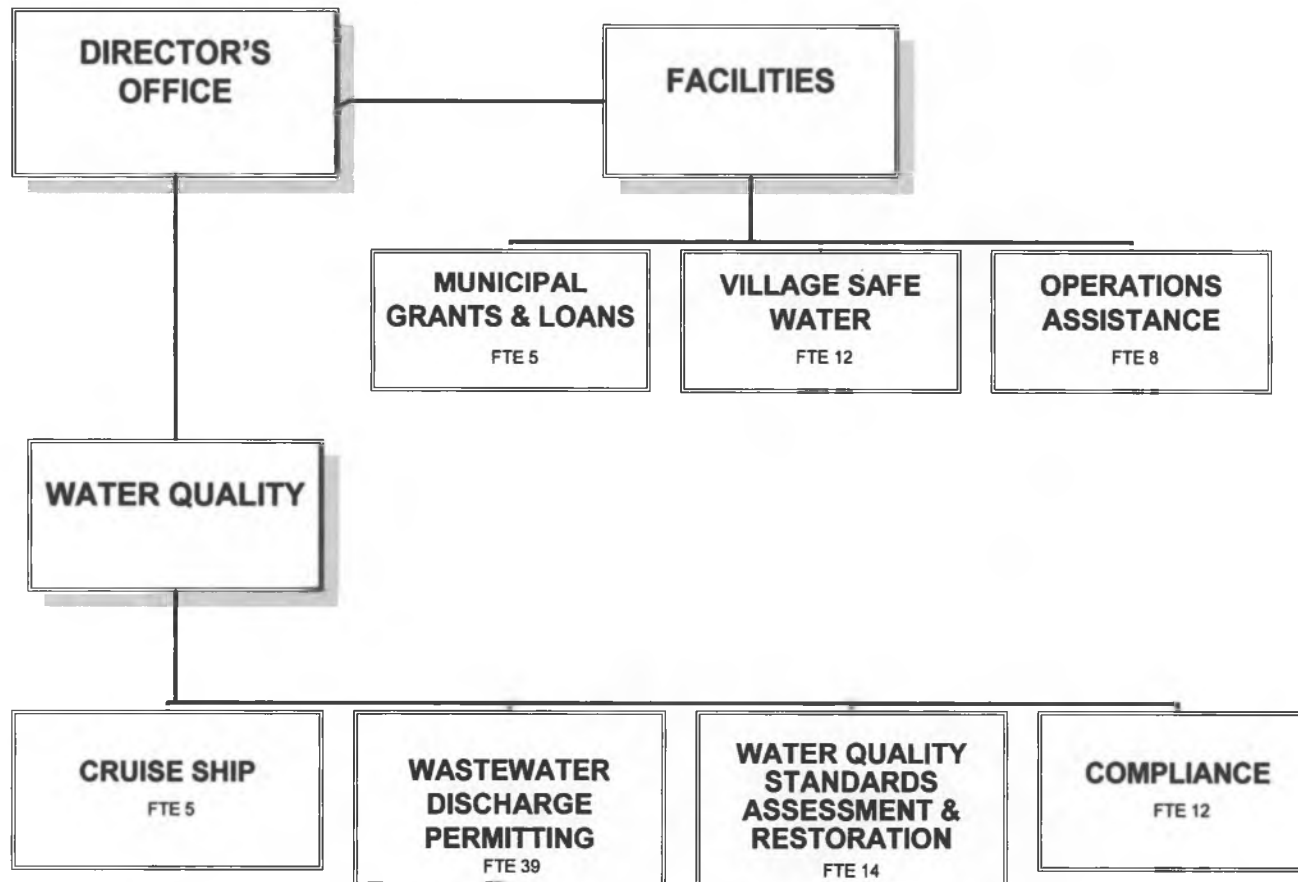


Division of Water

- ▶ All things water except:
 - Regulation of public drinking water systems – DEC, Environmental Health
 - Water quantity (water rights and in-stream flow reservations) – DNR



Division Structure



Division of Water Programs

▶ Facilities Programs

- Municipal Grants & Loans
- Village Safe Water
- Operations Assistance

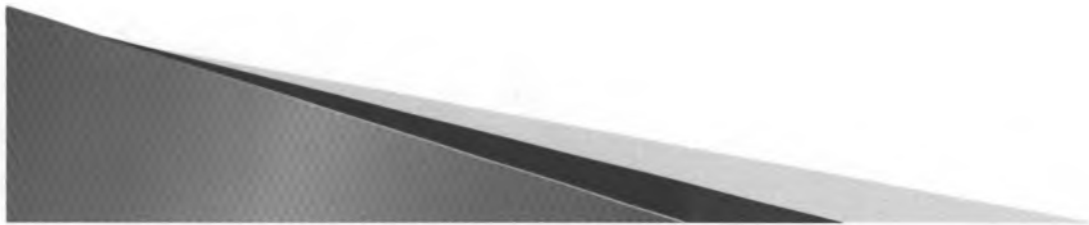
▶ Water Quality Programs

- Cruise Ship
- Wastewater Discharge Permitting
- Water Quality Standards, Assessment, & Restoration
- Compliance

Division of Water – Facilities

▶ Core Services

- Grants, loans and engineering assistance for drinking water, sewerage, and solid waste facilities
- Training and certification of water and sewerage system operators
- Over-the-shoulder and emergency assistance to operators in remote communities



Municipal Grants and Loans

Facilities Programs
Municipal Grants & Loans
Village Safe Water
Operations Assistance

▶ Grants

- State Matching Grants
(AS 46.03.030)
- Grant based on population size
 - 60% (10,000+)
 - 70% (1,000 < 10,000)
 - 85% (<1,000)



Municipal Grants and Loans

- ▶ Eligible projects:
 - Drinking Water supply, treatment, distribution and storage
 - Wastewater collection, treatment, and discharge systems
 - Solid waste facilities
 - Water quality enhancement



Municipal Grants and Loans

► Financing

- Clean Water Loan Fund (AS 46.03.032)
- Drinking Water Loan Fund (AS 46.03.036)
 - 100% of eligible costs to a community that can afford loan
 - Low-interest
 - 1.5% for 5–20 year term
 - 1% for under 5 year term





Village Safe Water (VSW)

Facilities Programs
Municipal Grants & Loans
Village Safe Water
Operations Assistance

▶ Mission

- Work with rural communities to develop sustainable sanitation facilities
 - Provide safe water and sewage disposal in villages
 - Provide 100% grants for planning, design and construction projects

VSW – Funding Sources

- ▶ Funding Sources

- EPA
- USDA–RD
- State

- ▶ Funding Shares

- 75% federal
- 25% State

- ▶ \$40 million/year



VSW Projects

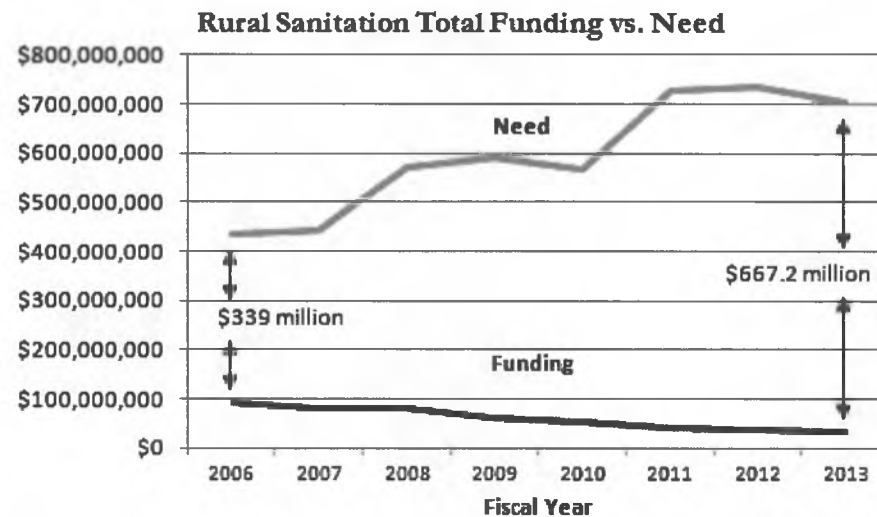
- ▶ Planning, Design and Construction
 - Drinking water systems
 - Sewage systems
 - Washeterias
 - Solid waste management facilities

- ▶ Creates local jobs, training



VSW – Key Issues

- ▶ Widening gap between needs and available funding
 - Funding has declined by 64% in the last 9 years
- ▶ Affordability
- ▶ Sustainability
- ▶ Operations and maintenance

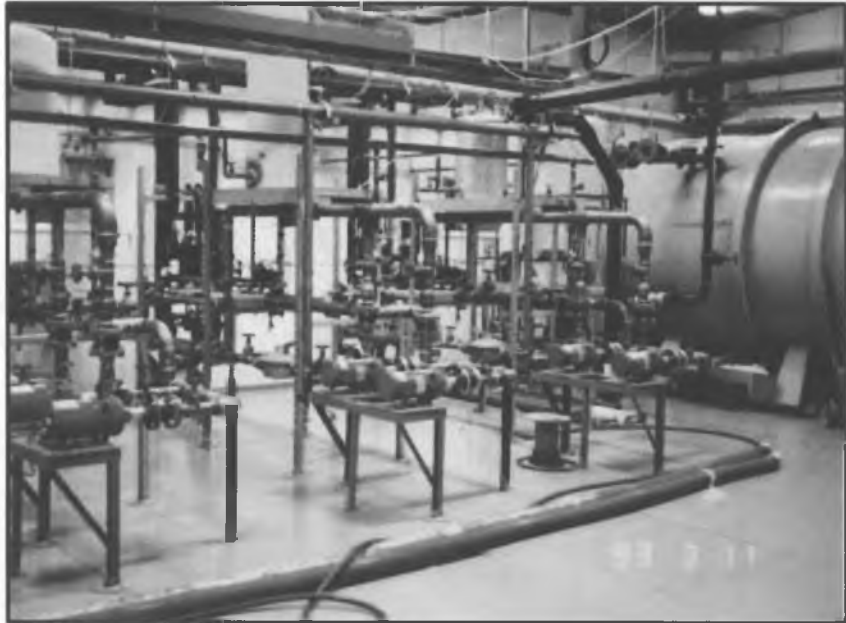


Operations Assistance

Facilities Programs
Municipal Grants & Loans
Village Safe Water
Operations Assistance



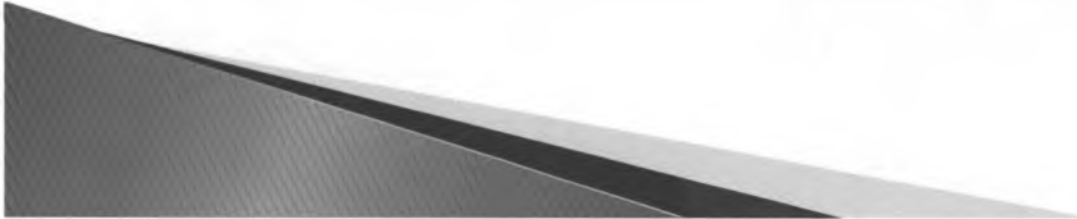
- ▶ Operator Training and Certification (18 AAC 74)
- ▶ Establish certification levels for operators of water and sewer systems
 - Ensure correct skill set to safely operate facilities
 - Develop and administer training programs for operators
 - Develop and administer exams to certify operators



Operations Assistance – Remote Maintenance Worker (RMW) Program

- ▶ Improve capacity of rural Alaskans to operate local water and sewer facilities
- ▶ Safeguard State and federal capital investments in utility infrastructure

Remote Maintenance Workers

- ▶ 15 Remote Maintenance Workers
 - 13 working for 7 Regional Health Corporations
 - 2 DEC employees
 - ▶ Routine travel to villages to provide “over-the-shoulder” assistance to facility operators
 - ▶ Emergency travel to provide immediate response to facility freeze up/break downs
 - ▶ Remote monitoring pilot – RMWs in Anchorage & Bethel to monitor treatment plants in villages
- 

Remote Maintenance Workers

2012 emergency response to:

Adak
Akhiok
Aleknagik
Aniak
Anvik
Atmautlauk
Brevig Mission
Chalkyitsik
Chefornak
Chevak
Chignik Lagoon
Chuathblauk
Circle
Emmonak
Gampbell

Goodnews Bay
Grayling
Gulkana
Igiugig
Kiana
Kivalina
Klukwan
Koliganek
Kongiganak
Koyukuk
Lime Village
Manokotak
Marshall

Mekoryuk
Minto
Mountain Village
Napakiak
Napaskiak
New Stuyahok
Newhalen
Newtok
Nikolaevsk
Noatak
Noorvik
Nunapitchuk
Pilot Station
Platinum
Quinhagak
Savoonga

Selawik
Shageluk
Sleetmute
South Naknek
St. George
St. May's
Tanacross
Teller
Tetlin
Tuluksak
Tununak
Wales

Division of Water Programs

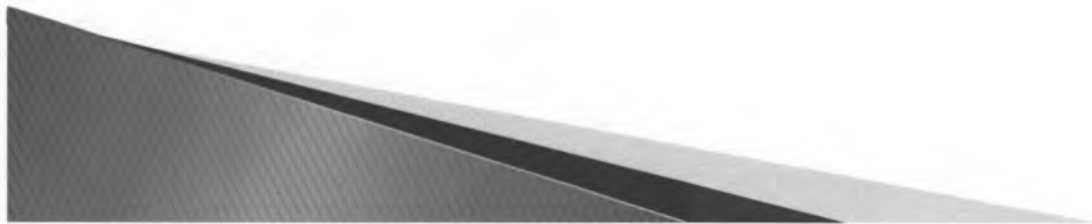
- ▶ **Facilities Programs**
 - Municipal Grants & Loans
 - Village Safe Water
 - Operations Assistance
- ▶ **Water Quality Programs**
 - Cruise Ship
 - Wastewater Discharge Permitting
 - Water Quality Standards, Assessment, & Restoration
 - Compliance



Division of Water – Water Quality

▶ Core Services

- Establish protective standards for water quality
- Improve water quality conditions where they are below standards
- Issue wastewater discharge permits
- Ensure compliance with permit conditions
- Provide community assistance with water quality protection
- Provide user friendly access to water quality data



Cruise Ships

Water Quality Programs

Cruise Ship

Wastewater Discharge Permitting

Water Quality Standards Assessment, & Restoration
Compliance

- ▶ Ocean Rangers
- ▶ Air emissions
- ▶ Wastewater Permits
- ▶ Science Advisory Panel



Ocean Rangers (AS 46.03.476)

- ▶ Observe vessel compliance with health, safety and environmental rules
- ▶ Established 2006
- ▶ 2012:
 - Rangers on 88% of voyages
 - 1,544 total reports
- ▶ 7 of 21 ocean rangers deployed were Alaskans



Science Advisory Panel

- ▶ Established 2009
- ▶ 11 multi-discipline members
- ▶ Reviewed treatment effectiveness, new technologies
- ▶ Technology Workshop, 2013
- ▶ Preliminary Report to Legislature, 2013



Wastewater Discharge Permitting

Water Quality Programs

Cruise Ship

Wastewater Discharge Permitting

Water Quality Standards Assessment, & Restoration
Compliance

- ▶ All discharges of wastewater to water, land, or the subsurface require a discharge permit (AS 46.03.100)




Wastewater Discharge Permitting

▶ Permittees include:

- Timber industry
- Mining
- Oil and gas
- Seafood processing
- Construction
- Municipalities – Domestic Wastewater



Wastewater Discharge Permitting

- ▶ Alaska Pollutant Discharge Elimination System (APDES)
 - Alaska, along with 46 other states, has authority for the NPDES program – the Alaska Pollutant Discharge Elimination System (APDES) program
 - ▶ October 2008 – EPA approved Alaska’s application for APDES primacy
 - ▶ October 2012 – fourth and final phase transferred to DEC – full primacy
 - ▶ EPA retains oversight
- 

Wastewater Discharge Permitting



- ▶ Calendar Year 2012
 - 1,297 general permit authorizations
 - 7 individual permits
 - 4 general permits

- ▶ Permitting efficiencies
 - 1,563 online submittals
 - Permit applications
 - Reports
 - Construction General Permit
 - Automatic coverage

Water Quality Standards

Water Quality Programs

Cruise Ship

Wastewater Discharge Permitting

Water Quality Standards Assessment, & Restoration

Compliance

- Alaska's water quality standards are developed by DEC and approved by EPA
- Water quality standards are used
 - To set wastewater discharge limits in permits
 - To evaluate the health of waters
- Alaska routinely reviews and updates

Water Quality Assessment

Water Quality Programs

Cruise Ship

Wastewater Discharge Permitting

Water Quality Standards Assessment, & Restoration

Compliance

▶ **Baseline water quality monitoring**

- Marine
- Freshwater

▶ **Targeted**

- Impairment
- Document restoration



Water Quality Restoration

Water Quality Programs

Cruise Ship

Wastewater Discharge Permitting

Water Quality Standards Assessment, & Restoration Compliance

- ▶ **Alaska Clean Water Actions**
 - Grant funding to communities, organizations
 - Monitoring
 - Ordinances
 - Restoration activities
 - Education projects

- ▶ **Prevention**



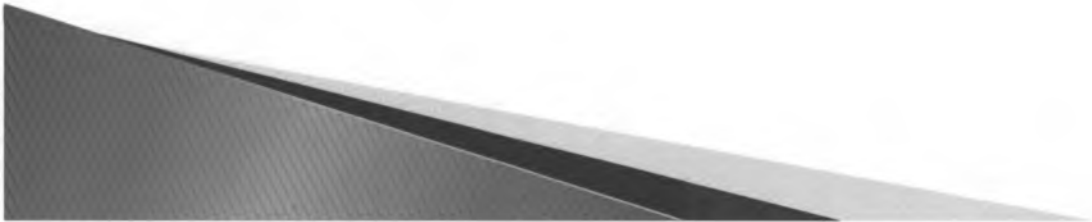
Compliance

Water Quality Programs

Cruise Ship

Wastewater Discharge Permitting

Water Quality Standards Assessment, & Restoration
Compliance

- ▶ Facilities monitor discharges and self-report
 - ▶ DEC reviews facility data
 - ▶ DEC inspects facilities for permit compliance
 - ▶ DEC provides compliance assistance
 - ▶ DEC takes enforcement actions, when warranted
- 

DEC Inspections

- ▶ 154 DEC inspections during 2012
 - 135 inspections of APDES or NPDES-permitted facilities
 - 28 based upon water-quality complaints
 - 5 joint inspections with EPA

- ▶ 24 Notices of Violation



Division of Water

Department of Environmental Conservation
Michelle Bonnet Hale, Director
Michelle.Hale@Alaska.Gov
907 269-7599





THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

**Department of
Environmental Conservation**

Office of the Commissioner

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January 30, 2013

The Honorable Eric Feige, Co-Chair
House Resources Committee
Alaska State Capitol, Room 124
Juneau, AK 99801

The Honorable Dan Saddler, Co-Chair
House Resources Committee
Alaska State Capitol, Room 104
Juneau, AK 99801

Dear Representative Feige and Representative Saddler:

Thank you for the opportunity allowing the Department of Environmental Conservation (DEC) to present the House Resources Committee with an overview of the department. An understanding of the mission, responsibilities and functions of the department are important to a productive session as we appear before the committee and work towards the common goal of providing a high level of service for Alaskans.

During the discussion with the committee on January 23, 2013, members had questions to which the department has promised additional information.

Representative Seaton requested information comparing the amount of time required to process air quality permits, both before and after the State of Alaska assumed primacy for the program under the Clean Air Act. ADEC Division of Air Quality, Air Permits Program has responsibility for three Clean Air Act related air quality control permits: operating permits, minor permits, and construction permits. Benefits of our State permit program include responsive staff experienced and knowledgeable of local and State culture, priorities, and environmental challenges, such as operating in arctic conditions. Also, air permit appeals are administered through State processes and courts. Air permit primacy is germane for only one of the three types of State permits.

- **Construction Permits**—Under the Federal Clean Air Act and amendments of 1990, the Environmental Protection Agency (EPA) developed a federal pre-construction review program to ensure major projects do not adversely impact ambient air. The statutes authorize EPA to delegate primacy to implement the program, to states. The State has run an EPA approved major source pre-construction review program since 1983. DEC has made two significant changes to this State program in 1997 and 2004 respectively. The Clean Air Act, State environmental statutes, and other regulations developed under those statutes have also changed substantially since the early 1980s. Due to these changes, a comparison of Federal Construction Permit program and timing from the early 1980s to the State's current Construction permit program and performance would not be a relevant comparison. Construction permits take an average of 287 days to issue.
- **Minor Permits**—This is a State-only air quality permitting program implemented in 2004 as part of Alaska's plan to manage Air Quality under the Clean Air Act. It is the current incarnation of the State-only permitting program since Alaska originally developed State

Air Quality permits in the mid 1970s. As a State-only program, there is no analogous EPA air permit program for primacy comparison. Minor permits take an average of 177 days to issue.

- Operating Permits—Under Title V of the Federal Clean Air Act as amended in 1990, EPA requires each state to develop an operating permit program. Alaska developed their approved plan and permitting program effective in 1997. In addition, ADEC met federal schedules to issue all operating permits by 2003. Since Alaska met its schedule, EPA has not issued operating permits for Alaskan sources. As such, Alaska has no pre-primacy federal operating permit statistics to compare. Operating permits and renewals take an average of 703 days to issue. Operating permits are issued for five year periods and facilities can continue to operate under their existing permits while renewals are being processed.

Representative Feige asked Environmental Health Division Director, Elaine Busse Floyd, for additional information on the process for adding to the list of herbicides approved for agricultural use in Alaska.

The responsibility for applying for registration of a pesticide in the State of Alaska is with the producer, who must submit an application for registration. DEC does not mandate which pesticides may be sold in Alaska, DEC simply validates the registration request. In order for a pesticide to be registered with the State of Alaska, it must already be registered with the Environmental Protection Agency (EPA). The motivation for a producer to register a product in the State of Alaska would be to sell it in the state. The process for State registration is not extensive – the required elements of the application for registration are in 18 AAC 90.205. Other states may have more pesticides registered, but this is due to the larger use of pesticides in those states as a result pest pressure compared to Alaska, as opposed to Alaska having more rigid requirements.

Representative Tarr requested information from Director Floyd related to monitoring of off-gassing from old landfills, specifically those with subsequent developments on site.

Explosive gas (primarily methane) is generated by the degradation of organic wastes. By regulation (18 AAC 60.350), all Class I and Class II municipal solid waste landfills (all landfills accepting >5 tons per day) must monitor for explosive gases, and must report to DEC immediately if limits are exceeded. The Class III landfills do not monitor for explosive gas; however, the department has the ability to require explosive gas monitoring if conditions warrant.

Several of the larger closed landfills are conducting explosive gas monitoring. This is particularly relevant anywhere where there are structures nearby where gas can migrate. Examples of closed facilities that are conducting gas monitoring include the closed Elmendorf Air Force Base landfill, the closed Fort Richardson landfill, the closed Merrill Field landfill, and the closed International Airport Road landfill. Generally, explosive gas is most concerning to structures built on top of, or near, landfills because it can migrate below the ground surface and accumulate to explosive levels in enclosed structures.

January 30, 2013

In addition to the municipal landfills, sewage solids monofills that contain more than 2,500 cubic yards of waste are required to establish continuous explosive gas monitoring in buildings that are closer than 500 feet (18 AAC 60.470(j)(3)).

Representative Wilson had interest in tuberculosis blood testing for reindeer and whether the test results were available immediately.

The tuberculosis blood test results from a lab requires a few days. The benefit of the testing method employed is that it does not require multiple handling of the animals, is faster, and tests at a more sensitive level. Alaska played a vital role in the validation of this test. There was a recommendation by the US Animal Health Association for the U.S. Department of Agriculture to validate this test, but there were inadequate reindeer numbers in the lower 48 to accomplish this. Without Alaska's collaboration, this test would not have been validated and able to be used by producers across the nation.

Lastly, Representative Saddler asked Water Division Director, Michelle Bonnet Hale for clarification on Village Safe Water Funding Sources. Specifically, of the total \$40 million per year, how much is state contributed and how much is contributed by the federal government? The correct total amount is \$36 million, of which 75% is contributed by the federal government and requires a 25% state match. This equates to approximately \$27 million federal dollars and \$9 million state dollars.

Sincerely,



Larry Hartig
Commissioner

cc: Representative Peggy Wilson
Representative Mike Hawker
Representative Kurt Olson
Representative Paul Seaton
Representative Geran Tarr
Representative Chris Tuck